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# **TMA LZEHV Monitoring Schemes (SA) (Trial)**



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**A scheme trial using the Telematics Monitoring  
Application (TMA) for the Department for Infrastructure  
and Transport, South Australia**

**September 2023**

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## About Us

Transport Certification Australia (TCA) is a national organisation that provides assurance services relating to transport technologies and data to enable improved public purpose outcomes from road transport.

Priority outcome areas enabled by TCA services include improved road safety, transport efficiency, freight productivity, asset management and sustainability.

Key aspects of TCA include:

- An independent not-for-profit entity, with government oversight
- Administration of the National Telematics Framework, including its rules, specifications, agreements, digital infrastructure and other supporting services
- Assurance services that support but are appropriately separated from regulators, policy makers and enforcement activities, and underpin telematics applications and associated information and data services
- Advice that is based on evidence and a deep subject matter knowledge
- Trusted partner to both government and industry stakeholders, enabling a nationally consistent open market, with services covering all road vehicle types and associated digital infrastructure.

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# 1 Introduction

## 1.1 Purpose

This document describes the TMA LZEHV Monitoring Schemes (SA), which are being trialled and made available by the Department for Infrastructure and Transport (DIT), South Australia. The following schemes are associated with the Telematics Monitoring Application (TMA), which includes the Smart OBM feature:

- TMA LZEHV Monitoring Scheme – Vehicles Up to 20m (SA)
- TMA LZEHV Monitoring Scheme – Vehicles > 20m and ≤ 26m (SA)
- TMA LZEHV Monitoring Scheme – Vehicles > 26m and ≤ 30m (SA)
- TMA LZEHV Monitoring Scheme – Vehicles > 30m and ≤ 36.5m (SA)
- TMA LZEHV Monitoring Scheme – Vehicles > 36.5m and ≤ 42m (SA)
- TMA LZEHV Monitoring Scheme – Vehicles > 42m and ≤ 53.5m (SA).

TMA LZEHV Monitoring Schemes (SA) will enable monitoring of eligible low or zero emission heavy vehicles (LZEHV) on approved routes in South Australia.

## 1.2 Scope

This document describes the TMA LZEHV Monitoring Schemes (SA) and how they are used with the TMA application.

The following information is included:

- Scheme parameters
- Key scheme processes
- Roles and responsibilities.

## 1.3 Background

South Australia has a statewide goal to reduce greenhouse gas emissions by more than 50% below 2005 levels by 2030 and achieve net zero emissions by 2050. The use of LZEHVs on approved parts of the South Australian road network will help further that goal. An LZEHV is a heavy vehicle that has relatively low or no tailpipe emissions. Examples, as described in the instrument of access approval, include heavy vehicles with:

- An electric motor with fixed or removable batteries
- A hydrogen engine
- A hydrogen electric motor
- A diesel or petrol hybrid electric engine
- An ethically or sustainably sourced alternative fuel engine.

This scheme trial was developed by DIT to determine whether LZEHVs are suitable for the freight task currently performed by heavy vehicles with combustion engines, and assess their impact on approved routes of the South Australian road network<sup>1</sup>.

To participate in a TMA LZEHV Monitoring Scheme (SA), a transport operator ('Operator') must conform with the requirements specified within the instrument of access approval, which consists of an applicable permit issued by the National Heavy Vehicle Regulator (NHVR) ('applicable permit')<sup>2</sup>.

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<sup>1</sup> This scheme trial does not include the monitoring of Euro 4 Diesel vehicles.

<sup>2</sup> Participation in the trial does not exempt an Operator from the requirement to comply with conditions set out in any Notice or permit under which they are operating.

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Enrolment in the TMA application is one of the requirements that must be met by the Operator. Enrolment in the TMA application is performed by the certified Application Service Provider (ASP) selected by the Operator.

The ASP is responsible for the installation of a TCA-approved telematics device in the vehicle being utilised in accordance with the instrument of access approval.

The Smart OBM system supplier (or Operator-nominated personnel that the supplier authorises as suitably trained) is responsible for the installation of a TCA-approved Smart OBM system in the vehicle being utilised in accordance with the instrument of access approval.<sup>3</sup>

The ASP is responsible for the collection of data from vehicles enrolled in accordance with the requirements of the TMA application for the scheme<sup>4</sup>.

ASPs provide data records to TCA. TCA analyses the data and makes reporting available to DIT via the Telematics Analytics Platform (TAP).

The TMA application is offered at Level 2 Assurance appropriate to these vehicles (see Appendix A for a definition of Level 2 Assurance)<sup>5</sup>.

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<sup>3</sup> TCA approval of a telematics device or Smart OBM system may be in the form of type-approval or an equivalent approval mechanism acceptable to TCA. The ASP must meet applicable requirements in the functional and technical specification, irrespective of the approval mechanism.

<sup>4</sup> The Operator may be eligible to perform the role of ASP in full or part, subject to the approval of TCA.

<sup>5</sup> The TMA application can be used for a variety of purposes. In this document, TMA is described in the context of the scheme group, which has specific business requirements associated with the standard operation of the TMA application.

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## 2 TMA LZEHV Monitoring Schemes (SA)

### 2.1 Trial Objectives

The trial will commence when ASPs monitoring vehicles operating in the trial start sending data to TCA via approved mechanisms. The trial will run for 12 months after commencement (with a possible extension), and its efficacy will be assessed at the end of that period.

*Note: Access permits will be issued for the initial 12-month period for trialling purposes, with possible extensions thereafter based on the performance and impacts of the vehicle.*

The trial will be limited to LZEHV (as described in applicable permits) operating in South Australia that have installed telematics devices and Smart OBM systems approved by TCA for use at Level 2 Assurance or higher.

The trial has several objectives that will be used to determine its success. The trial will:

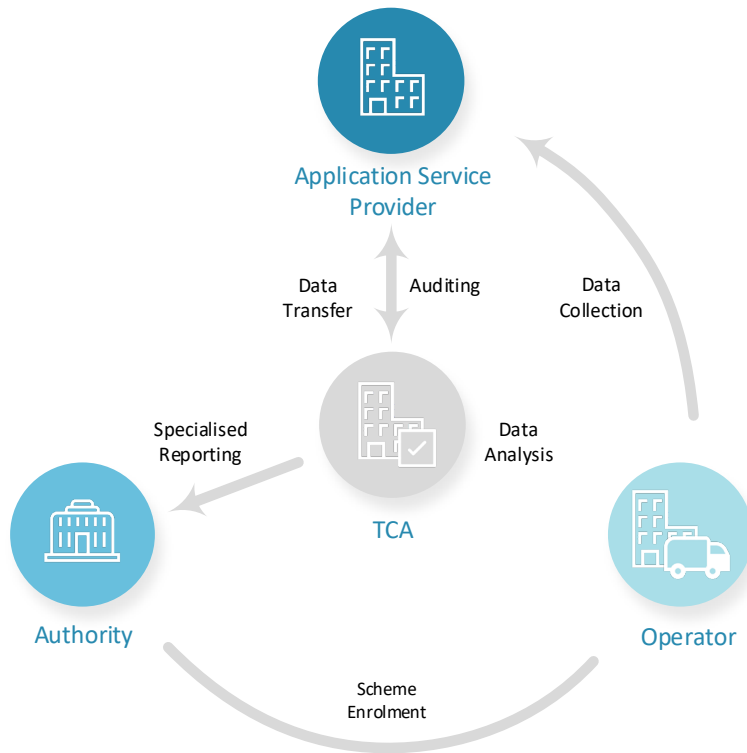
- Enable LZEHV (enrolled in the scheme) to obtain access to approved parts of the South Australian road network (as described in applicable permits)
- Make telematics data of LZEHV (enrolled in the scheme) available to DIT with agreed graphical representation via TAP
- Assess whether meaningful information can be accessed and derived from telematics data of a TMA scheme group to:
  - Determine the suitability and reliability of LZEHV to perform the freight task compared with heavy vehicles with combustion engines
  - Collect practical data regarding the on-road performance and infrastructure impacts of LZEHV to inform broader state and national access policy for these vehicles.
- Obtain feedback from DIT about aspects of the trial and use that feedback to refine the requirements for the operational phase of the scheme.

### 2.2 Participants

Figure 1 outlines the key interactions between participants for the use of the TMA application for a TMA LZEHV Monitoring (SA) scheme:

- DIT, as the Authority of the scheme, requires the monitoring, with reporting, of the Operator's vehicle(s) as a condition of the Authority allowing the Operator and its vehicle(s) to participate in the scheme.
- Operators are vehicle operators that agree to enrol vehicles in the scheme, and consent to their data collected through the TMA application to be used for the intended purpose (as defined by the Authority and agreed to by the Operator in the ASP–Operator Agreement).
- ASPs, certified by TCA, offer telematics services (hardware, software and associated processes) to enable enrolment of eligible vehicles in the TMA application (as well as other applications available within the National Telematics Framework [NTF]), collection of data from installed telematics devices and reporting of data to TCA.
- TCA administers the TMA application and its schemes within the NTF, ensuring that data security and privacy concerns are managed. TCA receives vehicle enrolment details from Operators via ASPs, and makes ASP–Operator Agreements available to participants. TCA also receives telematics data from ASPs, performs data analysis, and makes standard and specialised reporting available to the Authority (and other bodies authorised by the Authority) via TAP as agreed between the Authority and TCA, and in accordance with the intended purpose as agreed by the Operator in the ASP–Operator Agreement.

**Figure 1: Scheme Participants and Key Interactions**



*Note: Interactions between scheme participants are consistent with interactions between TMA application participants, and are not specific to the scheme.*



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## 2.3 Common Scheme Features

This section describes the common scheme features of a TMA LZEHV Monitoring (SA) scheme. For information on features that are specific to a TMA LZEHV Monitoring (SA) scheme, refer to the scheme descriptions in the appendices of this document.

a. ASP Certification

TCA will certify ASPs to provide services for the TMA application.

b. Enrolment

ASPs will enrol vehicles in the TMA application and the scheme at the request of the Operator.

The ASP will manage key steps of enrolment including approval, and as necessary, enrolment cancellation and replacement.

Figure 2 shows the pre-enrolment steps for the scheme.

Figure 3 shows the reporting processes for the scheme.

Figure 4 shows the enrolment cancellation and reporting processes for the scheme.

*Note: See Appendix B, Table B.1, for values that must be entered into the Scheme and Authority Code data elements of an enrolment form or enrolment report.*

c. Devices and Data Collection

The device used in the TMA application is a telematics device, approved by TCA for use at Level 2 Assurance or higher.

The telematics device will collect:

- Position data at 30-second intervals, and
- Date and time data.

The connected device used in the TMA application is a Smart OBM system (i.e. an OBM system approved by TCA to Category B or Category C). See Appendix A for definitions of OBM system categories.

The Smart OBM system will collect mass and vehicle configuration data. The Smart OBM system will collect mass data at 5-minute intervals.

*Note: Smart OBM systems are unable to provide reliable axle mass readings when a vehicle is in motion. The collection of mass records every 5 minutes is specifically for data analysis and the identification of possible changes to the load of a vehicle category.*

d. Data Reporting

The ASP shall transfer data records collected through the TMA application to TCA no less frequently than each calendar month, and as described in *Telematics Monitoring Application Functional and Technical Specification*.

e. Data Analysis and Reporting

TCA will make data analysis and reporting for the scheme available to the Authority through TAP.

Through TAP, the Authority will have access to:

- Interactive maps, which represent de-identified data using data elements collected as part of the scheme; and
- Specific reporting required for scheme management.

*Note:*

- The type, number, frequency and graphical output of specific reporting will be subject to agreed terms reached between TCA and the Authority.*
- The TMA application relies on changes in vehicle position records over a 30-second period to derive vehicle speed. Average and maximum vehicle speed results are estimates only, and*

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*may be influenced by factors such as road geometry and GNSS quality. Authorities should exercise caution when interpreting vehicle speed derived from the TMA application.*

The use of TMA for this scheme is intended to provide a basic representation of vehicle movements based on the data collected and the use of data for the intended purpose of the scheme (as agreed by the Operator in the ASP–Operator Agreement).

The Authority will manually review the operation of vehicles (through TAP) against the approved road network. TCA does not offer automated exception reporting to assess whether a vehicle has not met access conditions granted by the Authority.

A Scheme Participation Report will be made available to the Authority via TAP. This report may include the following standard measures and dimensions as shown in Table 2.

**Table 2: Scheme Participation Report**

<b>Example Measures</b>
<ul style="list-style-type: none"><li>• Count of all vehicles enrolled in a TMA LZEHV Monitoring scheme</li><li>• Count of vehicles enrolled in a TMA LZEHV Monitoring scheme that TCA received data from</li><li>• Vehicles enrolled in a TMA LZEHV Monitoring scheme that TCA did not receive data from for at least 30 consecutive days</li></ul> <p><i>Note: Reporting of this measure will include vehicle identities. An enrolled vehicle will only be included in this measure if, without a satisfactory explanation, it has not provided data for at least 30 consecutive days.</i></p> <ul style="list-style-type: none"><li>• Count of Operators with vehicles enrolled in a TMA LZEHV Monitoring scheme</li></ul>

## 2.4 Key Scheme Processes

Figure 2 outlines the key actions taken by each participant during the pre-enrolment stage of the operation of the scheme.

*Note: This process assumes that TCA has already certified the ASP to provide TMA application services.*

**Figure 2: Pre-Enrolment Process**

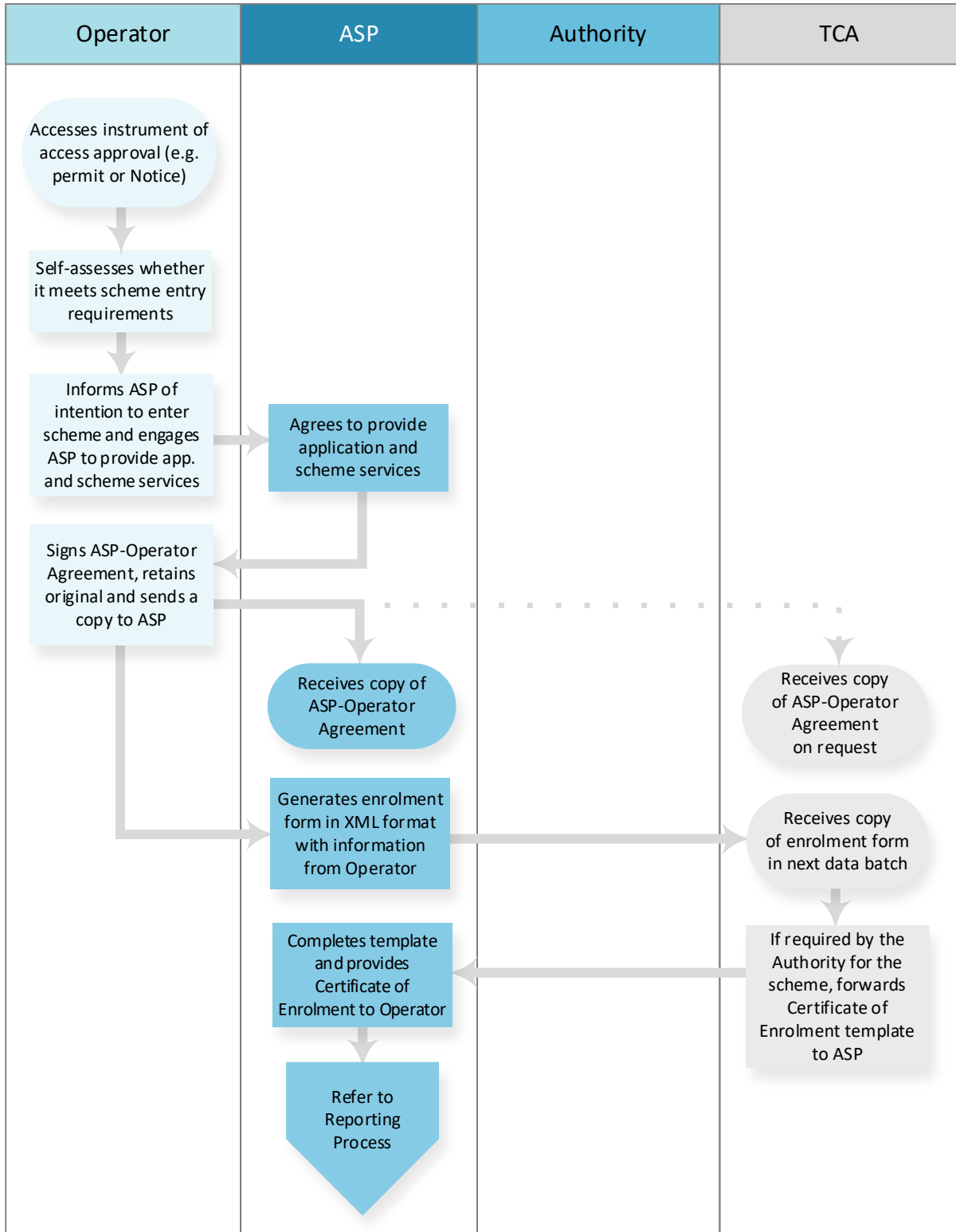
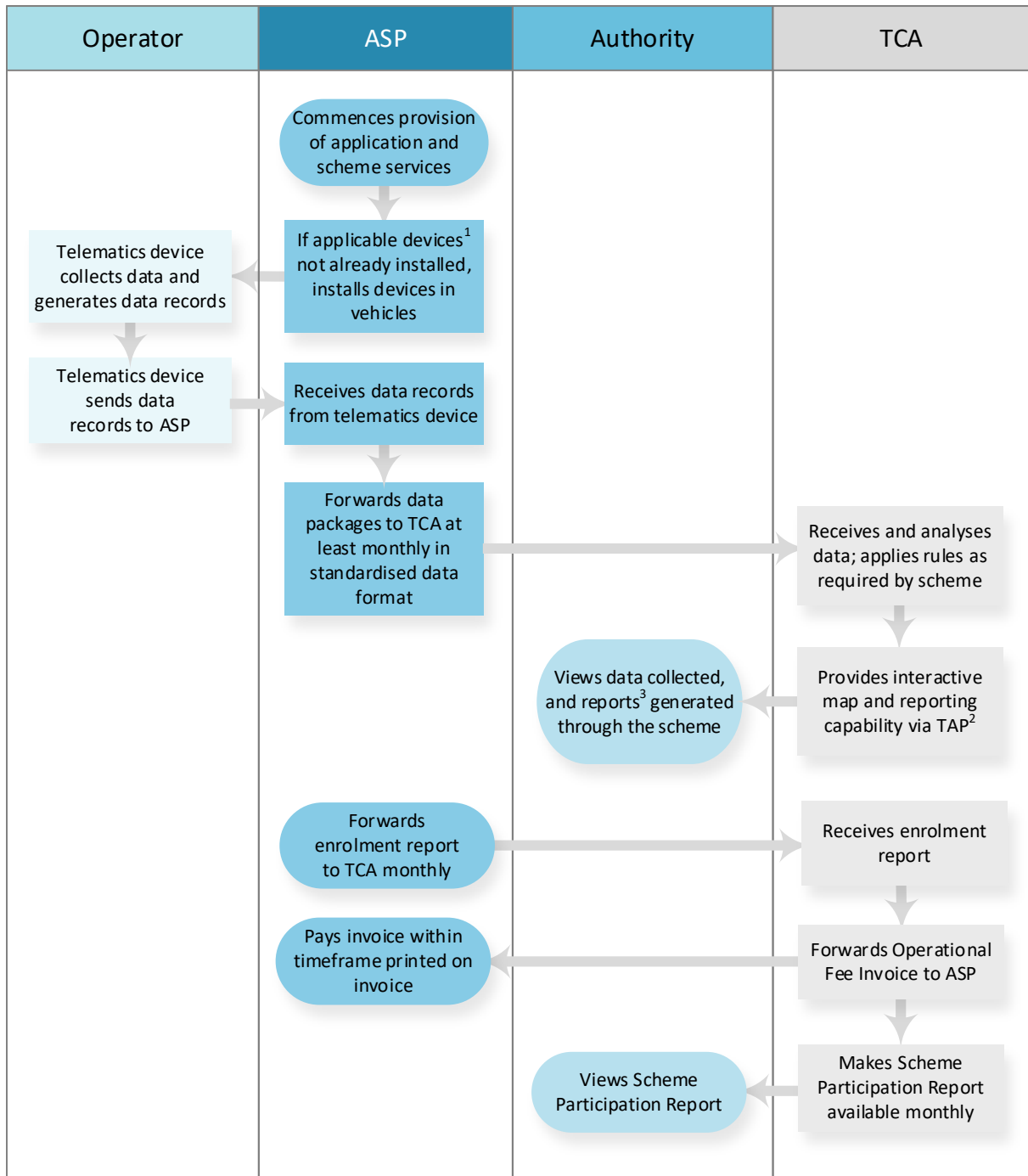


Figure 3 outlines the key actions related to data collection, record generation and reporting for the scheme.

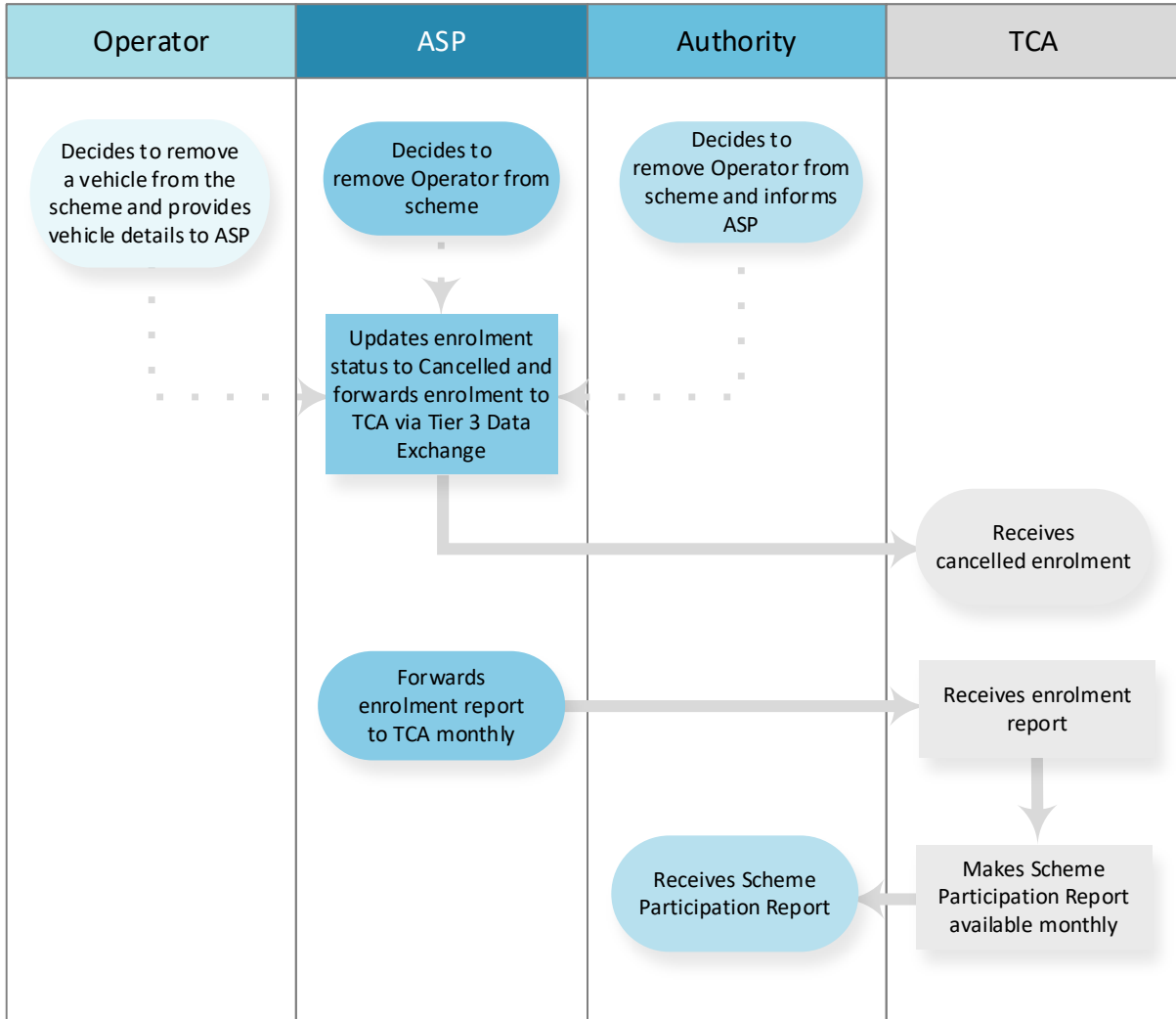
**Figure 3: Reporting Processes**



1. Applicable devices include a TCA-approved telematics device and a TCA-approved Smart OBM system.
2. Data will be updated at least monthly.
3. The Authority will nominate the locations that will be subject to location-based reports (subject to agreed terms).

Cancellation of enrolment may be initiated by the Operator, the Authority or the ASP.  
 Figure 4 outlines the key actions to discontinue enrolment of a vehicle in the scheme.

**Figure 4: Enrolment Cancellation and Reporting Processes**



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## 2.5 Roles and Responsibilities

In delivering the objectives of the scheme, **TCA** will:

- Provide a document (this document) describing the use of the scheme as part of the TMA application, and stating its operation in the trial
- Produce or maintain collateral, as necessary, to support the scheme. Examples include the provision of current versions of:
  - *Telematics Monitoring Application Functional and Technical Specification*
  - *Telematics Business-to-Business Data Exchange Functional and Technical Specification*
  - *Telematics Device Functional and Technical Specification*
  - *On-Board Mass System Functional and Technical Specification*
  - *Interconnectivity of Telematics Device with Other Systems Functional and Technical Specification*
- Support the reporting of data records via Tier 3 Data Exchange using a RESTful application programming interface (API), with these records formatted using a JSON format
- Support the reporting of enrolment forms and enrolment reports using a RESTful API, with these documents formatted using an XML format
- Inform ASPs of the scheme details and entry conditions
- Produce an ASP–Operator Agreement for use with the scheme and make it available from the TCA website
- Ensure that TAP is set up to enable the Authority to access reporting generated by the scheme (in accordance with the intended purpose as agreed by the Operator in the ASP–Operator Agreement)
- Maintain the cloud environment and databases, etc. for receipt of data records from the TMA application
- Produce and execute an ASP–TCA Certification Agreement, which formalises the relationship between TCA and the ASP with regard to ASP certification, or update the current Agreement
- Assess and certify whether an ASP meets requirements to provide TMA services with the Smart OBM feature
- Approve devices used in the scheme
- Ensure the intellectual property rights of ASPs are protected when assessing whether an ASP can meet operational requirements of the scheme
- If required by the Authority, provide certified ASPs with the Certificate of Enrolment template
- After the end of each month, forward Operational Fee Invoices to ASPs upon receipt of enrolment reports
- With the ASP, monitor via TAP whether a device malfunction has been resolved within agreed timeframes
- Notify the ASP when data from an enrolled vehicle has not been received for one month
- Provide the Authority with reporting outlined in 2.3e via TAP
- Ensure the confidentiality of ASP data is maintained
- Unless directed by the Authority and consented to by the Operator, de-identify the TMA telematics data it has received relating to the Operator’s nominated vehicle(s) 12 months from its receipt of the data.

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**The Authority will:**

- Maintain documentation required by the Authority for the scheme
- Undertake program coordination activities related to the scheme with TCA
- Access reporting outlined in 2.3e via TAP, and review data trends and numbers of enrolled vehicles
- In conjunction with TCA, communicate scheme-related policy changes to industry and stakeholders.

**ASPs will:**

- Interact with TCA to establish the delivery mechanism for provision of data packages to TCA (noting that a data package includes data records, enrolment forms and enrolment reports)
- Receive notification from Operators regarding the enrolment status of vehicles in the scheme, and forward this information to TCA using an agreed mechanism on a monthly basis
- Provide the ASP–Operator Agreement to an Operator once an agreement to provide services for the scheme has been made
- Be responsible for the installation, operation and maintenance of telematics devices (and any connected devices) and the reporting of data received from those devices, and as described in the *Telematics Monitoring Application Functional and Technical Specification*
- Upon request from TCA, obtain from the Smart OBM system supplier (or Operator-nominated personnel that the supplier authorises as suitably trained) records of installation, operation, calibration, programmed maintenance and remediation-of-malfunction activity of individual Smart OBM systems and forwards them to TCA
- If required by the Authority, provide Certificates of Enrolment to enrolled Operators, using the template received from TCA, and coordinate their removal from vehicles no longer enrolled in the scheme
- Pay Operational Fee Invoices received from TCA, generated upon receipt of enrolment reports, within the timeframe shown on the invoice
- In the event of a device malfunction: liaise with the Operator and/or device supplier to resolve the issue; report the malfunction to TCA within the required time period; monitor via TAP whether the device malfunction has been resolved within agreed timeframes; and notify TCA when the malfunction has been resolved
- Provide back-office capability to process collected data records as required by the scheme
- Deliver data records to TCA, using agreed data delivery mechanism, required data formats and meeting data reporting requirements.

**Operators will:**

- Access scheme rules and entry conditions on the Authority's website and determine whether they meet those conditions
- Access the applicable permit and ensure compliance with its requirements for the scheme
- Upon self-assessment that scheme entry conditions are met, notify the ASP of its intention to enrol in the scheme
- Agree to share data collected by its ASP with TCA for the scheme using a signed ASP–Operator Agreement
- Follow rules for enrolment in the scheme
- If authorised by the Smart OBM system supplier to do so, maintain records of installation, operation, calibration, programmed maintenance and remediation-of-malfunction activity for individual Smart OBM systems.
- Store original signed ASP–Operator Agreement and forward copies to the ASP and TCA (on request)
- Engage an ASP to provide services for the scheme
- Notify the ASP of the date that a vehicle or the Operator will no longer participate in the scheme.

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## A Acronyms and Definitions

### Acronyms

Acronym	Definition
API	application programming interface
ASP	Application Service Provider
ATM	aggregate trailer mass
DIT	Department for Infrastructure and Transport
GNSS	Global Navigation Satellite System
GVM	gross vehicle mass
LZEHV	low or zero emission heavy vehicle
NTF	National Telematics Framework
NHVR	National Heavy Vehicle Regulator
TAP	Telematics Analytics Platform
TMA	Telematics Monitoring Application
UTC	Coordinated Universal Time

### Definitions

Term	Definition
application	A capability of the NTF that provides business value to stakeholders, delivered as an assembly of policy, business components and technical components, within the context of an identified level of assurance.
Application Service Provider (ASP)	A service provider that has been certified by TCA as meeting the requirements of one of more telematics applications.
approval mechanism	The mechanism by which TCA approves a device, such as a telematics device or connected device, for use in a telematics application. The approval mechanism used may be type-approval, or an equivalent approval mechanism acceptable to TCA.
ASP–TCA Certification Agreement	The written agreement made between an ASP and TCA that recognises the fact that the ASP, having satisfied TCA's requirements for appointment as an ASP, is appointed in that capacity, and sets out the legal obligations of each party with respect to the ongoing role of the ASP.
ASP–Operator Agreement	A written agreement between an ASP, an Operator and TCA which sets out the terms on which the ASP will provide application services to the Operator, and the intended purpose for collecting data from the Operator's vehicle(s) enrolled in the scheme.



Term	Definition
Authority	An entity, associated with a jurisdiction, responsible for the administration of one or more NTF applications, and compliance activities as necessary. An Authority may appoint an administrator to perform its functions. <i>See also: jurisdiction.</i>
connected device	Any device or technology connected to a telematics device.
data collection period	A whole number of days in the UTC time zone for which all application data is provided. Successive data collection periods are contiguous.
data package	A package of information sent via Tier 3 Data Exchange for a data collection period.
data record	A discrete and defined set of data elements generated by a device.
enrolment	Both the process and outcome by which an Operator enters an Authority's scheme. Each vehicle must be enrolled for each scheme it participates in. Enrolment also confirms the application and conditions (if applicable) that the vehicle is monitored under.
enrolment form	An electronic document that formally and simultaneously records the enrolment of a vehicle within a scheme, and within the application required by that scheme.
enrolment report	A summary of enrolments relevant to a given Authority for a specified reporting period, including any aggregated data required by specific applications.
heavy vehicle	A vehicle that has a gross vehicle mass (GVM) or aggregate trailer mass (ATM) of more than 4.5 tonnes. The GVM of a vehicle is the maximum it can weigh when fully loaded, as specified by the manufacturer.
jurisdiction	A geographical area containing a road network (i.e. typically an Australian state or territory).
level of assurance	An assurance level that supports telematics applications, structured around the intended use of a telematics application, risks being managed, and the needs and expectations of consumers and other stakeholders.
Level 2 Assurance	Independent assessment of specific elements of a telematics application. Telematics data is combined with other data sources.
low or zero-emission heavy vehicle	A heavy vehicle that has relatively low or no tailpipe emissions. <i>See also: heavy vehicle</i>
OBM system category	A category of OBM system that is defined as follows: <ul style="list-style-type: none"> <li>• Category A – OBM systems in this category electronically display collected data to drivers and/or loaders.</li> <li>• Category B – OBM systems in this category also collect data and transfer the collected data to a telematics device using a mechanism agreed and implemented by the ASP and supplier of the OBM system.</li> <li>• Category C – OBM systems in this category collect data and transfer data records in a standardised way to a telematics device (in accordance with <i>Interconnectivity of Telematics Device with Other Systems Functional and Technical Specification</i>).</li> </ul>
Operator	An entity that operates one or more vehicles eligible to enter a scheme.

Term	Definition
scheme	The generic term for a specific use of an application linked to delivering a policy objective.
Smart OBM system	An OBM system approved by TCA to Category B or C. <i>See also: OBM system category</i>
telematics device	The primary telematics unit which monitors vehicle parameters, which may include identity, datetime, location, speed, vehicle category or mass.
Tier 1 Data Exchange	A web services solution where structured information is exchanged that complies with requirements such as authentication, security, privacy and certainty of delivery. It includes exchanges of information related to a vehicle's enrolment in telematics applications, conditions and adherence to those conditions.
Tier 2 Data Exchange	The human-initiated (rather than automated) exchange of business-related information and advice. Typical exchanges via this tier include reporting of issues and resolutions, correspondence regarding certification and re-certification, advice regarding information and communications technology (ICT), data assurance and other reporting.
Tier 3 Data Exchange	The packaging and delivery of data packages, comprising data records and enrolment-related artefacts. Data packages have several uses which include data analysis by the recipient, data assurance, and for research purposes.
vehicle configuration	<p>A technical representation of the on-road footprint of the vehicle (that is, the number and configuration of trailers and axle groups), and is determined using data from the OBM system and data supplied by the ASP. It is typically captured with axle group pattern notation, for example '2-44/S444' for the vehicle category of Semi Trailer 6 Axle.</p> <p>Vehicle configuration data collected includes the number and order of axle groups, and the mass sensor unit (MSU) ID for each axle group. TCA infers additional information from the data set it requires from the OBM system.</p>

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## B TMA LZEHV Monitoring Scheme – Vehicles Up to 20m (SA)

### Purpose

The *TMA LZEHV Monitoring Scheme – Vehicles Up to 20m (SA)* is a scheme made available by DIT to monitor road utilisation of LZEHV's up to 20 metres in length, operating under the applicable permit on approved routes on the South Australian road network 'Low and Zero Emission Heavy Vehicles 1A'.

### Background

To participate in the scheme, Operators must conform with the requirements specified within the applicable permit issued by the NHVR.

Eligible vehicle categories for the scheme are described in the applicable permit, and must be fitted with a telematics device and Smart OBM system as described in 2.3c. They include (but are not limited to) the following example:

- Prime mover towing a semi-trailer.

DIT monitors vehicles enrolled in the scheme on routes as described in the applicable permit and indicated on the applicable network map available on the DIT website.

### Scheme Features

Through TAP, the Authority will have access to specific reporting that includes road utilisation of LZEHV's up to 20 metres in length on the South Australian road network 'Low and Zero Emission Heavy Vehicles 1A'.

Other aspects of this scheme operate in accordance with generic TMA LZEHV Monitoring (SA) scheme processes, such as ASP Certification, Enrolment, Data Reporting, and Data Analysis and Reports. For more information, see 2.3.

Refer to the following when entering values into data elements for Scheme or Authority Code – for example, in an enrolment report or enrolment form.

**Table B.1: Scheme Name and Authority Code**

<b>Scheme Name</b> (full)	<b>Scheme Data Element Value</b> (e.g. for enrolment form or report)	<b>Authority Code</b> <b>Data Element Value</b>
TMA LZEHV Monitoring Scheme – Vehicles Up to 20m (SA)	TMALZESA_LT20	SA

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## C TMA LZEHV Monitoring Scheme – Vehicles > 20m and ≤ 26m (SA)

### Purpose

The *TMA LZEHV Monitoring Scheme – Vehicles > 20m and ≤ 26m (SA)* is a scheme made available by DIT to monitor road utilisation of LZEHV's longer than 20 metres and up to and including 26 metres in length, operating under the applicable permit on approved routes on the South Australian road network 'Low and Zero Emission Heavy Vehicles 2A'.

### Background

To participate in the scheme, Operators must conform with the requirements specified within the applicable permit issued by the NHVR.

Eligible vehicle categories for the scheme are described in the applicable permit, and must be fitted with a telematics device and Smart OBM system as described in 2.3c. They include (but are not limited to) the following example:

- B-Double.

DIT monitors vehicles enrolled in the scheme on routes as described in the applicable permit and indicated on the applicable network map available on the DIT website.

### Scheme Features

Through TAP, the Authority will have access to specific reporting that includes road utilisation of LZEHV's longer than 20 metres and up to and including 26 metres in length on the South Australian road network 'Low and Zero Emission Heavy Vehicles 2A'.

Other aspects of this scheme operate in accordance with generic TMA LZEHV Monitoring (SA) scheme processes, such as ASP Certification, Enrolment, Data Reporting, and Data Analysis and Reports. For more information, see 2.3.

Refer to the following when entering values into data elements for Scheme or Authority Code – for example, in an enrolment report or enrolment form.

**Table C.1: Scheme Name and Authority Code**

<b>Scheme Name</b> (full)	<b>Scheme Data Element Value</b> (e.g. for enrolment form or report)	<b>Authority Code</b> <b>Data Element Value</b>
TMA LZEHV Monitoring Scheme – Vehicles > 20m and ≤ 26m (SA)	TMALZESA_20T026	SA

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## D TMA LZEHV Monitoring Scheme – Vehicles > 26m and ≤ 30m (SA)

### Purpose

The *TMA LZEHV Monitoring Scheme – Vehicles > 26m and ≤ 30m (SA)* is a scheme made available by DIT to monitor road utilisation of LZEHV's longer than 26 metres and up to and including 30 metres in length, operating under the applicable permit on approved routes on the South Australian road network 'Low and Zero Emission Heavy Vehicles 2B'.

### Background

To participate in the scheme, Operators must conform with the requirements specified within the applicable permit issued by the NHVR.

Eligible vehicle categories for the scheme are described in the applicable permit, and must be fitted with a telematics device and Smart OBM system as described in 2.3c. They include (but are not limited to) the following examples:

- A-Double
- B-Double.

DIT monitors vehicles enrolled in the scheme on routes as described in the applicable permit and indicated on the applicable network map available on the DIT website.

### Scheme Features

Through TAP, the Authority will have access to specific reporting that includes road utilisation of LZEHV's longer than 26 metres and up to and including 30 metres in length on the South Australian road network 'Low and Zero Emission Heavy Vehicles 2B'.

Other aspects of this scheme operate in accordance with generic TMA LZEHV Monitoring (SA) scheme processes, such as ASP Certification, Enrolment, Data Reporting, and Data Analysis and Reports. For more information, see 2.3.

Refer to the following when entering values into data elements for Scheme or Authority Code – for example, in an enrolment report or enrolment form.

**Table D.1: Scheme Name and Authority Code**

<b>Scheme Name</b> (full)	<b>Scheme Data Element Value</b> (e.g. for enrolment form or report)	<b>Authority Code</b> <b>Data Element Value</b>
TMA LZEHV Monitoring Scheme – Vehicles > 26m and ≤ 30m (SA)	TMALZESA_26T030	SA

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## E TMA LZEHV Monitoring Scheme – Vehicles > 30m and ≤ 36.5m (SA)

### Purpose

The *TMA LZEHV Monitoring Scheme – Vehicles > 30m and ≤ 36.5m (SA)* is a scheme made available by DIT to monitor road utilisation of LZEHV's longer than 30 metres and up to and including 36.5 metres in length, operating under the applicable permit on approved routes on the South Australian road network 'Low and Zero Emission Heavy Vehicles 3A'.

### Background

To participate in the scheme, Operators must conform with the requirements specified within the applicable permit issued by the NHVR.

Eligible vehicle categories for the scheme are described in the applicable permit, and must be fitted with a telematics device and Smart OBM system as described in 2.3c. They include (but are not limited to) the following examples:

- A-Double
- B-Triple
- AB-Triple
- BA-Triple.

DIT monitors vehicles enrolled in the scheme on routes as described in the applicable permit and indicated on the applicable network map available on the DIT website.

### Scheme Features

Through TAP, the Authority will have access to specific reporting that includes road utilisation of LZEHV's longer than 30 metres and up to and including 36.5 metres in length on the South Australian road network 'Low and Zero Emission Heavy Vehicles 3A'.

Other aspects of this scheme operate in accordance with generic TMA LZEHV Monitoring (SA) scheme processes, such as ASP Certification, Enrolment, Data Reporting, and Data Analysis and Reports. For more information, see 2.3.

Refer to the following when entering values into data elements for Scheme or Authority Code – for example, in an enrolment report or enrolment form.

**Table E.1: Scheme Name and Authority Code**

<b>Scheme Name</b> (full)	<b>Scheme Data Element Value</b> (e.g. for enrolment form or report)	<b>Authority Code</b> <b>Data Element Value</b>
TMA LZEHV Monitoring Scheme – Vehicles > 30m and ≤ 36.5m (SA)	TMALZESA_30T036.5	SA

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## F TMA LZEHV Monitoring Scheme – Vehicles > 36.5m and ≤ 42m (SA)

### Purpose

The *TMA LZEHV Monitoring Scheme – Vehicles > 36.5m and ≤ 42m (SA)* is a scheme made available by DIT to monitor road utilisation of LZEHV's longer than 36.5 metres and up to and including 42 metres in length, operating under the applicable permit on approved routes on the South Australian road network 'Low and Zero Emission Heavy Vehicles 3B'.

### Background

To participate in the scheme, Operators must conform with the requirements specified within the applicable permit issued by the NHVR.

Eligible vehicle categories for the scheme are described in the applicable permit, and must be fitted with a telematics device and Smart OBM system as described in 2.3c. They include (but are not limited to) the following examples:

- AB-Triple
- BA-Triple.

DIT monitors vehicles enrolled in the scheme on routes as described in the applicable permit and indicated on the applicable network map available on the DIT website.

### Scheme Features

Through TAP, the Authority will have access to specific reporting that includes road utilisation of LZEHV's longer than 36.5 metres and up to and including 42 metres in length on the South Australian road network 'Low and Zero Emission Heavy Vehicles 3B'.

Other aspects of this scheme operate in accordance with generic TMA LZEHV Monitoring (SA) scheme processes, such as ASP Certification, Enrolment, Data Reporting, and Data Analysis and Reports. For more information, see 2.3.

Refer to the following when entering values into data elements for Scheme or Authority Code – for example, in an enrolment report or enrolment form.

**Table F.1: Scheme Name and Authority Code**

<b>Scheme Name</b> (full)	<b>Scheme Data Element Value</b> (e.g. for enrolment form or report)	<b>Authority Code</b> <b>Data Element Value</b>
TMA LZEHV Monitoring Scheme – Vehicles > 36.5m and ≤ 42m (SA)	TMALZESA_36.5T042	SA

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## G TMA LZEHV Monitoring Scheme – Vehicles > 42m and ≤ 53.5m (SA)

### Purpose

The *TMA LZEHV Monitoring Scheme – Vehicles > 42m and ≤ 53.5m (SA)* is a scheme made available by DIT to monitor road utilisation of LZEHV's longer than 42 metres and up to and including 53.5 metres in length, operating under the applicable permit on approved routes on the South Australian road network 'Low and Zero Emission Heavy Vehicles 4A'.

### Background

To participate in the scheme, Operators must conform with the requirements specified within the applicable permit issued by the NHVR.

Eligible vehicle categories for the scheme are described in the applicable permit, and must be fitted with a telematics device and Smart OBM system as described in 2.3c. They include (but are not limited to) the following examples:

- A-Triple
- AB-Triple
- BA-Triple
- ABB-Quad
- BAB-Quad.

DIT monitors vehicles enrolled in the scheme on routes as described in the applicable permit and indicated on the applicable network map available on the DIT website.

### Scheme Features

Through TAP, the Authority will have access to specific reporting that includes road utilisation of LZEHV's longer than 42 metres and up to and including 53.5 metres in length on the South Australian road network 'Low and Zero Emission Heavy Vehicles 4A'.

Other aspects of this scheme operate in accordance with generic TMA LZEHV Monitoring (SA) scheme processes, such as ASP Certification, Enrolment, Data Reporting, and Data Analysis and Reports. For more information, see 2.3.

Refer to the following when entering values into data elements for Scheme or Authority Code – for example, in an enrolment report or enrolment form.

**Table G.1: Scheme Name and Authority Code**

<b>Scheme Name</b> (full)	<b>Scheme Data Element Value</b> (e.g. for enrolment form or report)	<b>Authority Code</b> <b>Data Element Value</b>
TMA LZEHV Monitoring Scheme – Vehicles > 42m and ≤ 53.5m (SA)	TMALZESA_42T053.5	SA



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## Contact

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