



Australian  
Communications  
and Media Authority

# **Triple Zero Service Outage Inquiry**

## Submission to the Senate Environment and Communications References Committee

NOVEMBER 2025

**Canberra**

Level 3  
40 Cameron Avenue  
Belconnen ACT

PO Box 78  
Belconnen ACT 2616

**Melbourne**

Level 32  
Melbourne Central Tower  
360 Elizabeth Street  
Melbourne VIC

PO Box 13112  
Law Courts  
Melbourne VIC 8010

**Sydney**

Level 5  
The Bay Centre  
65 Pirrama Road  
Pyrmont NSW

PO Box Q500  
Queen Victoria Building  
NSW 1230

**Copyright notice**



<https://creativecommons.org/licenses/by/4.0/>

Except for the Commonwealth Coat of Arms, logos, emblems, images, other third-party material or devices protected by a trademark, this content is made available under the terms of the Creative Commons Attribution 4.0 International (CC BY 4.0) licence.

All other rights are reserved.

The Australian Communications and Media Authority has undertaken reasonable enquiries to identify material owned by third parties and secure permission for its reproduction. Permission may need to be obtained from third parties to re-use their material.

We request attribution as © Commonwealth of Australia (Australian Communications and Media Authority) 2025.

# Contents

Introduction	1
The Triple Zero Regulatory Framework	1
Other regulatory obligations related to the emergency call service	3
The ACMA's role in emergency call services	5
Other ACMA Activity relevant to the Terms of Reference	7



## Introduction

Regulation to support access to the emergency call service (commonly referred to as Triple Zero) have been in place since the *Telecommunications Act 1997* commenced. The primary obligations require the carrying of calls by telcos on their networks to the Emergency Call Person (ECP – Telstra for 000 and 112, and Concentrix for 106) and the on-forwarding of those calls by the ECP to state and territory emergency service organisations for handling of the emergency. In 2024-2025, 11.8 million calls were answered by the ECP.

While Triple Zero appears as a single service from a caller's perspective, the service is provided cooperatively by the Australian Government and the state and territory governments. The Australian Government is responsible for policy and regulatory arrangements relating to the national operator and carriers' networks, and the state and territory governments are responsible for the emergency service organisation call centres and emergency response. Each component of the end-to-end service is supported by telecommunications infrastructure provided by telecommunications carriers.

Following the Optus outage in 2023, the Government commissioned an independent review to examine emergency call arrangements, customer communications and complaints handling, and the report – *Review into the Optus Outage of 8 November 2023* (the review) was delivered to the Government in March 2024.

The review recognised the complexity of carrier's networks and current arrangements and concluded that: *Triple Zero is, in practical terms, an ecosystem made up of multiple independent actors working together to provide a cohesive national service*. The Review made a range of recommendations to improve how that ecosystem operates. In April 2024 the Government accepted those recommendations (listed at Attachment A) and implementation commenced. The ACMA has since implemented responses to the six recommendations for which it was the lead responsible agency and contributed towards the implementation of several others.

The ACMA has welcomed the establishment of the Triple Zero Custodian which implements a key recommendation of the Review. This will provide, for the first time, a body to, among other things, oversee the effective functioning of emergency call services across the current complex ecosystem. This will complement the ACMA's role which is focused on enforcing compliance with regulatory requirements.

This submission provides an overview of the current regulatory arrangements including information on the most recent changes made to the regulatory arrangements in response to the Review.

## The Triple Zero Regulatory Framework

The [Telecommunications \(Consumer Protection and Service Standards\) Act 1999](#) (TCPSS Act) is the primary law under which the regulatory framework for emergency call services is established. Part 8 of the TCPSS Act sets out legislative objectives to ensure calls to emergency numbers are carried to Emergency Call Persons (ECPs), calls to numbers are answered promptly, transferred to the appropriate emergency service organisation without delay, and are supported by accurate caller location and identity information.

### The Emergency Call Service Determination

Under the TCPSS Act, the ACMA is required to make a determination in relation to emergency call services. The [Telecommunications \(Emergency Call Service\) Determination 2019](#) (the Determination) fulfils that requirement.

The Determination imposes requirements on carriers, carriage service providers (CSPs) and the ECPs (currently Telstra for 000/112 and Concentrix for 106) in relation to access, carriage and handling of calls to the emergency call service. Amongst other matters, this includes requirements for carriers to:

- maintain the effective functioning of networks
- ensure that end-users who make an emergency call are given access to the emergency call service
- ensure that an emergency call is carried to the relevant termination point for the call
- notify the emergency call person (ECP) and other carriers and CSPs about major or significant local outages
- undertake welfare checks as soon as practicable on an end-user who made an unsuccessful emergency call during a major outage, and
- allow emergency calls to be connected to the ECP during a mobile network outage when an alternative mobile network is available (i.e. emergency 'camp-on').

On 28 October 2024, amendments to the Determination commenced which require CSPs to cease the supply of carriage services (colloquially referred to as blocking) where carriers identify that the mobile phone would not provide for the end-user to access the emergency call service on the user's home mobile network, or if that was not available, on another mobile network which did have coverage.

On 1 November 2025, additional obligations also came into effect which bolster these existing requirements, including by requiring carriers to:

- wilt their base stations where they lose connectivity to their core network - an obligation which makes it more likely an end-user will be able to access the ECP when their home network is experiencing issues (rec 1 of the Review);
- notify emergency service organisations of major outages and significant local outages (rec 5)
- take reasonable steps to test emergency calls on their network, including camp-on functionality
- provide written reports to the ACMA and the Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts (the Department) after a major outage with details on the outages and actions being taken to avoid similar outages occurring in the future (rec 6); and
- provide management plans where they propose significant changes to their network technology and architecture that will fundamentally and adversely change how emergency calls are carried.

There are tightly limited exemptions from the Determination's requirements that recognise some matters may be beyond the control of the carrier or CSP, and therefore unreasonable to hold a telco to account for the provision of access.

Together, the TCPSS Act and the Determination form the foundation of the regulatory framework directed at ensuring that the telco industry delivers a reliable, nationally consistent emergency call system.

### Industry codes

This foundation is complemented by two emergency call service specific industry codes registered under Part 6 of the *Telecommunications Act 1997*, being the:

- [Industry Code C536: Emergency Call Service Requirements](#) (the ECS Code), and
- [Industry Code C674: Emergency Calling – Network and Mobile Phone Testing](#) (the Emergency Testing Code).

### ***Emergency Call Service Requirements Industry Code***

The ECS Code sets out operational requirements for carriers and service providers to ensure end-users can access emergency call services. The ECS Code complements the Determination by detailing technical, procedural, and communication obligations, including cooperation between providers and emergency call persons, and promoting public understanding of the Triple Zero system. On 13 October 2025, the ACMA registered a variation to the ECS Code to address recommendation 16 of the Review which came into effect on the date of registration. The variation requires carriers to undertake testing to ensure that network changes do not affect the carriage of emergency calls. The changes also require carriers to have and deploy network management tools with an ability to remotely access and manage core network elements involved in the delivery of emergency calls. The remote network tools must be independent from other network elements, to enable their use during an outage.

### ***Emergency Calling – Network and Mobile Phone Testing Industry Code***

The Emergency Calling Network and Mobile Phone Testing Industry Code was drafted by the Australian Telecommunications Alliance to address recommendations 3 and 4 of the Review and registered by the ACMA on 16 October 2025 (coming into effect the same day). The Code sets out requirements for mobile network carriers to participate in six-monthly end-to-end testing of the Triple Zero ecosystem, including network functionality during outages, device behaviour, and interoperability across networks. That testing is being undertaken by the University of Technology Sydney under a contract with the Department.

## **Other regulatory obligations related to the emergency call service**

### **The Telecommunications (Customer Communications for Outages) Industry Standard 2024**

In response to recommendation 10 of the Review, the then Minister of Communications directed the ACMA to make a Standard to improve communications in the event of certain types of network outages.

As a result, the ACMA made the Telecommunications (Customer Communications for Outages) Industry Standard under Part 6 of the Tel Act in October 2024 addressing major outages, and updated it in April 2025 to address communications during significant local outages.

The objectives set out in the Direction did not specifically relate to access to the emergency call service, but focused on the broader need of the community and key stakeholders to understand where connectivity was not available, whether through call, messaging or other data access. To the extent the Standard covers outages to voice networks, it necessarily engages with potential impacts around accessing the emergency call service.

Under the Standard, carriers must notify other carriers and CSPs, communicate with the public, and inform relevant stakeholders—including the ACMA—as soon as practicable after detecting an outage which meets the definition of a major or significant local outage or receiving notification from another carrier.

The definition of a major outage is an unplanned outage that affects:

- (a) More than 100,000 services in operation or all services in any State or Territory, and
- (b) Is expected to last more than 60 minutes.

The definition of a significant local outage is an unplanned outage that:

- (a) is not a major outage; and
- (b) affects or is likely to affect:
  - a. 250 or more services in operation in remote Australia that is expected to last for 3 or more hours
  - b. 1,000 or more services in operation in regional Australia that is expected to last for 6 or more hours.

Updates must continue until services are restored, be provided immediately when there is a material change and otherwise at least once every six hours during the first 24 hours and once every subsequent 24-hour period. When services are restored, carriers must promptly notify other carriers and CSPs and communicate to the public and stakeholders that services have resumed.

As a CSP, there are similar obligations with respect to notifying end-users and the public. They must attempt to notify affected end-users as soon as practicable after receiving notice of an outage, communicate with the public, and provide updates at the same intervals as carriers. Once services are restored, CSPs must notify affected end-users and inform the public that services have resumed. These requirements aim to ensure timely, transparent communication to minimise disruption and maintain confidence during network outages.

### **The Telecommunications (Consumer Complaints Handling) Industry Standard 2018**

This Standard sets out obligations for telcos to:

- try to fix any complaint when you first speak to a consumer
- fix urgent complaints within 2 working days
- have a written complaints-handling process
- explain how you plan to fix problems within 15 working days
- take all agreed-upon action within 10 working days
- keep a record of all complaints
- monitor complaints and identify emerging issues.

In April 2025, the Standard was updated to establish rules to support consumers to lodge and have addressed complaints about network outages. These rules came into effect on 30 June 2025 and implemented recommendation 12 of the Review.

### **Customer equipment regulation of handsets**

The ACMA administers a scheme whereby suppliers label customer equipment with the Regulatory Compliance Mark (RCM), signifying that devices are compliant with relevant technical standards. One of the technical standards requires devices to be able to initiate a Triple Zero call to an available telecommunications network, and sets out how that is to be tested. If labelling with the RCM, suppliers must be registered on a database, make a declaration of conformity and keep compliance records for each device. For mobile phones, suppliers must have regard to a test report from an appropriate third party before applying a compliance label. Devices that do not comply with the relevant telecommunications standards cannot be supplied to the Australian market unless they are labelled as non-compliant.



Under Division 3 of Part 21 of the Telecommunications Act 1997 (the Act), the ACMA has the power to make technical standards related to certain aspects of customer equipment and customer cabling.<sup>1</sup>

The ACMA gives effect to these arrangements through subordinate instruments under sections 376 and 407 of the Act, relevantly being:

- the *Telecommunications (Mobile Equipment Air Interface) Technical Standard 2022* (the Air Interface Standard); and
- the *Telecommunications (Labelling Notice for Customer Equipment and Customer Cabling) Instrument 2025* (the Telecommunications Labelling Notice).

Schedule 1 to the Telecommunications Labelling Notice provides amongst other things that the Air Interface Standard is an applicable standard for customer equipment which is proposed to be:

- connected to a telecommunications network that is used to supply a public mobile telecommunications service; and
- used to supply a standard telephone service; and
- an addressable device.

Given that the Air Interface Standard is an applicable standard, a number of requirements follow:

- before supplying a device to market the manufacturer or importer must apply a compliance label (section 11) or a non-compliance label (section 15), which is to be accompanied by a written statement prepared in accordance with section 18 in the latter case; and
- for items compliant with the Air Interface Standard, the supplier must be registered on the national database (section 20), complete a declaration of conformity (section 22) and keep compliance records (section 27).

The Air Interface Standard requires compliance with an industry standard *S042.1 Requirements for connection to an air interface of a Telecommunications Network— Part 1: General*. The primary obligation in the industry standard is to ensure that a handset allows the initiating of an emergency call to the air interface of a mobile network, being defined under the Act to be the boundary of a mobile network. The industry standard specifies how that functionality should be tested. The regulation requires that testing occur prior to the time of supply to market.

There are no requirements for suppliers to undertake further testing of devices once they have been made available in the market. However, and as mentioned above, telcos may test the performance of devices currently in the market to comply with rules introduced in October 2024. These rules include blocking handsets that cannot access the emergency call service on the user's home mobile network, or if that is not available, another provider's network with coverage.

## The ACMA's role in emergency call services

The ACMA's role is to identify, investigate and take enforcement action for non-compliance by telcos with their obligations under the law, including those outlined above which are focussed on access to the emergency call service.

The ACMA's approach is outlined in its published Compliance and Enforcement policy which can be found at [Compliance and enforcement policy | ACMA](#), along with our published regulatory guides.

---

<sup>1</sup> See section 376.

## Enforcement options

The enforcement options available to ACMA for breaches of the law depend on the nature of the contraventions.

<i>Where the breach is of:-</i>	<i>Enforcement options are:-</i>
A Telecommunications Standard made under Part 6 of the Tel Act	<p>Issue a Formal warning</p> <p>Issue a Remedial direction</p> <p>Accept a court-enforceable Undertaking</p> <p>Issue an Infringement Notice (\$19,800 per alleged breach)</p> <p>Seek an order for civil penalties for up to \$250,000 per alleged contravention.</p>
The Emergency Call Service Determination	<p>Issue a Formal Warning</p> <p>Issue a Remedial direction</p> <p>Accept a court-enforceable undertaking</p> <p>Issue an Infringement Notice (\$19,800 per alleged breach)</p> <p>Seek an order for civil penalties for up to \$250,000 per alleged contravention (for the period up to and including 30 October 2025) and \$30 million per alleged contravention (for the period from 31 October 2025).</p>
A registered industry code	<p>Issue a Formal Warning</p> <p><del>Issue a Direction to Comply</del></p>
A service provider determination	<p>Issue a Formal warning</p> <p>Issue a Remedial direction</p> <p>Accept a court-enforceable Undertaking</p> <p>Issue an Infringement Notice (\$19,800 per alleged breach)</p> <p>Seek an order for civil penalties for up to \$10 million per alleged contravention.</p>
A carrier licence condition	<p>Issue a Formal warning</p> <p>Issue a Remedial direction</p> <p>Accept a court-enforceable Undertaking</p> <p>Issue an Infringement Notice (\$19,800 per alleged breach)</p> <p>Seek an order for civil penalties for up to \$10 million per alleged contravention.</p> <p>Note: the conditions under which a carrier licence can be cancelled by the ACMA are limited to either a failure to pay applicable charges or the entity becomes a “disqualified” corporate entity.</p>

## Other ACMA Activity relevant to the Terms of Reference

There are a number of other matters on the ACMA's forward work program which are relevant to the Inquiry's Terms of Reference.

### Review of Regulatory Settings

In light of the extent of the regulatory changes implemented in response to the Review, the ACMA had committed to undertake a review of their effectiveness within 12 months of the suite of protections commencing. While this is still planned, the ACMA is giving consideration to whether, in light of recent events, amendments are needed to be progressed ahead of that broader review. We continue to work with other stakeholders, including the Triple Zero Custodian, on these matters. The ACMA also expects the evidence and outcomes from this Inquiry will provide valuable input into those matters.

Separately, the Minister for Communications has indicated she intends to direct the ACMA to update the Outages Standard to provide for a public register of network outages. The ACMA expects to receive that direction before the end of 2025, with a requirement to make those amendments in the early part of 2026.

### Support for Triple Zero Custodian

With the passage of the *Telecommunications Legislation Amendment (Triple Zero Custodian and Emergency Calling Powers) Act 2025* on 28 October 2025, the ACMA is working with the Custodian to understand how the ACMA can support the Custodian in the discharge of its functions and priorities. This includes settling operating procedures to support the efficient management of requests from the Custodian for the ACMA to issue directions to carriers, CSPs or the ECPs, or the referral of matters for investigation.

### ACMA Triple Zero Compliance activities

The ACMA has two investigations into Optus' compliance with the emergency call service rules with respect to the recent Optus outage events on 18 September, and 28 September (second outage impacting calls to Triple Zero in Dapto, NSW). The investigations will consider Optus' compliance with the following regulations:

- Part 2 of the [Telecommunications \(Emergency Call Service\) Determination 2019](#)
- Part 2 of the [Telecommunications \(Customer Communications for Outages\) Industry Standard 2024](#)
- [Industry Code C536: Emergency Call Service Requirements](#)

The ACMA is also investigating TPG Telecom with respect to two separate incidents where customers using Samsung mobile phones were unable to call Triple Zero. The investigations will consider TPG's compliance with Part 4 of the Telecommunications (Emergency Call Service) Determination 2019.

In the 2024-25 financial year the ACMA completed four investigations that resulted in enforcement actions for Triple Zero compliance issues. Key enforcement outcomes include:

- Optus outage of 8 November 2023: In November 2024, subsidiaries of SingTel Optus paid penalties totalling more than \$12 million following the ACMA's investigation of Optus' significant network outage that disrupted access to Triple Zero.
- Telstra outage of 1 March 2024: In December 2024, Telstra paid a penalty of more than \$3 million following the ACMA's investigation of the 1 March 2024 disruption at Telstra's Triple Zero call centres.
- Telstra outage of 6 July 2024: In June 2025, Telstra paid a penalty of \$18,780 and entered into a court-enforceable undertaking following the ACMA's investigation of an outage impacting access to the 106 emergency call service.

- TPG outage of 15 August 2024: In June 2025, the ACMA gave TPG a formal warning for failing to notify Telstra as the ECP in a timely manner about an outage.

#### Optus Data Breach

The ACMA also investigated several subsidiaries of SingTel Optus about its 2022 data breach. This investigation assessed compliance with regulatory obligations relating to the acquisition, authentication, retention, disposal and protection of personal information, and more general requirements to mitigate the risk of fraud set out in a number of legislative instruments and Acts. This investigation is currently subject to ongoing Federal court proceedings which commenced on 20 May 2024.

#### Industry-wide Simulation exercise

ACMA representatives recently had the opportunity to participate in Exercise Disconnect and Reconnect – an exercise undertaken to explore the readiness of the various entities involved in facilitating access to Triple Zero or managing the impact when calls cannot get through. We found this a valuable exercise and understand the intent is to do these sorts of exercises regularly to facilitate early identification of vulnerabilities or improvements which can be made to maximise the chances that calls get through to Triple Zero. The ACMA welcomes this approach as an additional protective layer towards building confidence in consumers around the Triple Zero service.

**ATTACHMENT A**

**Recommendations made in the Review into the Optus outage of 8 November 2023**

**Recommendation 1**

Mandatory requirements should be put in place, by augmenting existing requirements or otherwise, to:

- More clearly and explicitly articulate precisely what is expected of network operators in regard to ensuring calls are delivered to Triple Zero
- Include specific obligations that network operators wilt towers in the event of loss of connectivity to a core network, ensuring calls to Triple Zero can be carried by other networks.

**Recommendation 2**

Establish a Triple Zero custodian, with oversight of and overarching responsibility for the efficient functioning of the Triple Zero ecosystem, including monitoring the end-to-end performance of the ecosystem.

There are a number of ways this could be achieved, including by establishing a new body or enhancing the role of an existing body. It would not be a regulatory function: where matters were identified for change, existing bodies would be responsible for implementation.

**Recommendation 3**

To ensure (to the extent possible) continuous access to Triple Zero, carriers must conduct 6-monthly end-to-end testing of all aspects of the Triple Zero ecosystem within and across networks. The end-to-end detection testing should include:

- Network functionality and capability during outages of various types
- Behaviour of all known devices in different circumstances
- Interoperability of all parts of the ecosystem (from originating carrier, to ECP, to ESO answering point) during outages.

Any identified deficiencies must be reported to the ACMA and be accompanied by a remediation plan with timetable.

This requirement should be mandated in a standard or determination.

**Recommendation 4**

If this testing does not include devices supplied by the customer (i.e. 'Bring your own device') then information should be provided to those customers warning that those devices may not have been tested in emergency scenarios.

**Recommendation 5**

Require carriers, through a standard or determination, to share real time network information detailing outages with relevant emergency services organisations and other appropriate entities, including the body referred to in Recommendation 2.

**Recommendation 6**

Require providers, through a standard or determination, to report to the ACMA and the Department, within a mandated timeframe after a major outage, detailing its causes, steps taken to resolve it, the impact on

Triple Zero, and a clear and detailed plan, with timeline, to address issues identified and avoid similar outages in the future.

#### **Recommendation 7**

Combine and expand existing disruption protocol instruments to cover all matters relevant to outages in any element of the Triple Zero ecosystem.

There are currently multiple obligations related to actions taken during and after network disruptions.

Combining these obligations in one document and ensuring they cover the system from end to end would greatly improve understanding and clarity of responsibility.

#### **Recommendation 8**

The Department should review the contract under which Triple Zero is delivered, with a specific focus on the central role of the ECP within the ecosystem.

The review should consider, in light of the recommendations of this Review relating to the Triple Zero ecosystem, including Recommendation 2, governance structures, separating financial matters from other ECP obligations.

#### **Recommendation 9**

The Protocol for Notification of Major Service Disruptions (the (the Protocol), should be improved and augmented with clear and detailed requirements for Government communication and collaboration during telecommunications outages through a central coordination point in Government.

This should cover communication and collaboration with carriers, relevant Ministers, Commonwealth, state and territory government agencies, TIO, the Australian Consumer and Competition Commission (ACCC), ACMA, Emergency Service Organisations (ESOs) and other relevant parties.

The Protocol should also be closely aligned with the Australian Government Crisis Management Framework (AGCMF) and the National Coordination Mechanism (NCM).

#### **Recommendation 10**

The ACMA should develop a standard or determination requiring carriers to communicate specific information to customers during and about outages. The Communications Alliance Emergency Communications Protocol – Industry Guideline G663:20221 or one or more of the carriers' existing internal communications protocols could be used as a base but there needs to be an explicit focus on communications between the affected network provider and its customers as well as other stakeholders.

#### **Recommendation 11**

The Department should develop further and promote the educational initiatives developed in 2020-2022 to assist the public, businesses and other organisations to prepare for and recover from outages as a result of natural disasters. These materials should be reviewed and enhanced to apply to a broader range of scenarios including major network outages. The Department should promote these materials to the community.

#### **Recommendation 12**

The Complaints Handling Standard and related Record Keeping Rules should be amended to ensure they account for the impacts of network outages and that the definition of complaint in the Standard meets community expectations in relation to crisis events.

**Recommendation 12**

The Complaints Handling Standard and related Record Keeping Rules should be amended to ensure they account for the impacts of network outages and that the definition of complaint in the Standard meets community expectations in relation to crisis events.

**Recommendation 13**

An industry wide standardised approach to the form of resolutions available to consumers affected by a crisis or large-scale outage should be implemented.  
This standardised approach should address the possible forms of compensation and penalties applicable to loss of service during outages, enabling the TIO to address mass events without requiring large numbers of individual complaints, investigations and resolutions. While it is not intended that this measure replace the Customer Service Guarantee (CSG), it could provide a similar framework through which outages affecting more than fixed line voice services are considered.

**Recommendation 14**

Work currently being undertaken on roaming during natural disasters should be followed by work on temporary roaming during outages caused by other events, such as those which occurred on 8 November 2023. That work should be undertaken with reference to international experience as to cost and feasibility.

**Recommendation 15**

The Australian Government should require mutual assistance arrangements to be established between telecommunications service providers during outages to assist in managing and resolving those outages, learning from international experience (for example, similar to the Canadian MOU).

**Recommendation 16**

Network operators should be required to establish the ability to remotely access and activate network management tools, and have sufficient network redundancy to deploy them, in the event of a core network outage.

**Recommendation 17**

Australian governments should review arrangements for maintaining their operations during outages including telecommunications redundancy for critical government services. Consideration should also be given to maintaining this information in a central repository.

**Recommendation 18**

The Department and the ACMA should institute a review of all legislation and regulation relating to Triple Zero, with a clear focus on the recommendations of this Review and the outcomes of the ACMA's investigation regarding the Optus outage.