

# Review of the Telecommunications (Emergency Call Service) Determination 2009

## Second Round Consultation Feedback

## Document information

Name of document	Review of the Telecommunications (Emergency Call Service) Determination 2009 - Second Round Consultation Feedback
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# About ESTA

The Emergency Services Telecommunications Authority (ESTA) provides the critical link between the Victorian community and the state's emergency services agencies. We provide Victoria's 24-hour emergency call-taking and dispatch services for Police, Fire, Ambulance and Victoria State Emergency Service (VICSES).

We also manage the provision of advanced, operational communications for Victoria's emergency services. These operational communications support police, fire, ambulance and VICSES personnel in the field.

This integration of emergency services communications within ESTA is unique in Australia and is best practice globally. We have a key role in facilitating interoperability for multi-agency responses. The ESTA model enables economies of scale by concentrating all emergency calls and dispatch in Victoria across three State Emergency Communications Centres (SECC), using one integrated technology platform.

ESTA has a particular focus within the Victoria community to support improving the experience for members of the community when requesting emergency service responses.

# Response

## Feedback on Round Two Determination 2019 Draft

Document Reference ID	Excerpt Statement in Preliminary Draft (As-provided)	Recommendation
Division 2.1 11 Networks	<p>(1) Carriers and carriage service providers must maintain, to the greatest extent possible, the proper and effective functioning of their controlled networks and their controlled facilities that are used for the carriage of emergency calls to the emergency call service.</p> <p>Note: This may include ensuring that controlled networks and facilities have:</p> <ul style="list-style-type: none"> <li>(a) measures to ensure transmission quality including echo control;</li> <li>(b) priority routing via dedicated pathways across networks.</li> </ul>	<p><b>Context:</b> Carriers, carriage service providers and emergency call persons will require increased levels of risk awareness, monitoring, control and testing as networks and supporting systems grow in complexity, and outages within these systems have become both more frequent and longer in duration.</p> <p><b>Recommendation:</b> Carriers, carriage service providers and emergency call persons supply ACMA with high-level network/system/process/security/people architecture information and risk management plans/controls/effectiveness to support ACMA's understanding of the complexity, risk profile and dependability of mobile, fixed copper, nbn, satellite and other carriage services twice per year.</p> <p><b>Recommendation:</b> Carriers, carriage service providers and emergency call persons supply ACMA with documentation each quarter articulating how various failure events (issues) and risks have been mitigated and tested to ensure continued operation of 000 services.</p> <p><i>Example Risk Statement: In reference to the mobile network architecture diagram provided - An outage to &lt;component A&gt; on the mobile network would not impede the ability for mobile devices with active SIMs and SIM-less devices to make a 000 call due to x,y,z mitigations/system design principals. This has been tested as of &lt;date&gt;.</i></p> <p><b>Objective:</b> ESTA suggests ACMA should have visibility over the level of risk and the overall dependability of networks and systems that service emergency calling to enable informed decision making in the future to maximise end-to-end emergency call taking service dependability.</p>

<p>Division 2.1 11 Networks</p>	<p>(1) Carriers and carriage service providers must maintain, to the greatest extent possible, the proper and effective functioning of their controlled networks and their controlled facilities that are used for the carriage of emergency calls to the emergency call service.</p> <p>Note: This may include ensuring that controlled networks and facilities have:</p> <p>(c) measures to ensure transmission quality including echo control;</p> <p>(d) priority routing via dedicated pathways across networks.</p> <p>(2) Carriers and carriage service providers must:</p> <p>(a) ensure that their controlled networks which are used for the carriage of emergency calls to the emergency call service have diversity and redundancy; or</p> <p>(b) have arrangements in place with other carriers or carriage service providers to carry emergency calls made using their controlled networks or controlled facilities in circumstances where the first mentioned carrier or carriage service providers' controlled network or controlled facility is unable to carry the calls.</p>	<p><b>Recommendation:</b> Carriers, carriage service providers and emergency call persons to provide ACMA with documentation each half-year articulating how redundancy, reliability and diversity of service is achieved for emergency calling services.</p> <p><b>Objective:</b> ESTA suggests ACMA should have visibility on the level of redundancy, reliability and diversity available in network providers to inform future decisions to maximise end-to-end emergency call taking service dependability.</p> <p>ESTA recognises that seeking this information regarding emergency calling redundancy and diversity twice a year will prompt positive behaviours and focus within providers.</p>
<p>Division 2.2 Subdivision A 12 Application of subdivision</p>	<p>(2) This subdivision does not apply if:</p> <p>(a) a matter beyond the control of the carriage service provider materially and adversely affects the provider's technical ability to give an end-user access to the emergency call service; or</p> <p>(b) the emergency telephone service used to make the emergency call is an exempt satellite service.</p>	<p><b>Recommendation:</b> Add sub-note to clarify that sub-division does not exclude scenarios where industry best practices have not been observed.</p> <p><i>Example: Single network routes between states carrying emergency calling services without redundancy.</i></p> <p><i>Example: Insufficient security controls, segregation of duties not adhered to, lack of regular penetration testing.</i></p>

	<p><b>Note:</b> Matters beyond the control of a carriage service provider which may materially and adversely affect a provider's technical ability to give an end-user access to an emergency call service include:</p> <ul style="list-style-type: none"> <li>(a) Failure of customer equipment or network equipment at the premises of the customer for that service because of a mains power outage, interference with, or misuse of, customer equipment or network equipment by end-users, or wear and tear.</li> <li>(b) Failure of in-building wiring because of physical damage at the customer's premises.</li> <li>(c) Failure of an access line because of damage or interference caused by a third party or by environmental factors.</li> <li>(d) Failure due to access to an emergency call service being barred on the customer equipment by the customer.</li> <li>(e) Failure of a controlled network or controlled facility because of a denial of service attack where reasonable measures have been taken to minimise the impact of such an attack.</li> </ul>	<p><b>Objective:</b> Carriage providers should be suitably compelled to make reasonable efforts in line with industry best practices to ensure key network infrastructure and controlling systems are not prone to single points of failure where large volumes of emergency callers may become impacted.</p>
<p>Division 2.2 Subdivision A  13 Requirements when supplying an exempt satellite service</p>	<p>13 Requirements when supplying an exempt satellite service</p> <p>Before a carriage service provider first supplies an exempt satellite service to a customer, the provider must notify the customer in writing that the service cannot be used to make an emergency call.</p>	<p><b>Recommendation:</b> All of the devices provided should be suitably labelled to reflect the service cannot be used to make an emergency call.</p> <p><b>Objective:</b> ESTA recognises during emergency events, information needs to be visibility available and recognised – a suitable visible reminder of the capabilities of the device can save vital time in emergency situations.</p>

<p>Division 2.3 Subdivision B 26 Information identifying carriage service providers</p>	<p>(2) If a carriage service provider's contact details provided in accordance with subsection (1) change, the provider must provide updated contact details to the emergency call person for 000 and 112 by the end of the next business <b>day after the change occurs</b>.</p>	<p><b>Recommendation:</b> Suggest change of wording to reflect 'before' the change occurs.</p> <p><b>Objective:</b> Avoid communication issues / delays.</p>
<p>Division 2.4 27 Communication requirements - networks and facilities unable to carry emergency calls</p>	<p>27 Communication requirements - networks and facilities unable to carry emergency calls</p> <p>If a carrier or carriage service provider becomes aware that its controlled networks or controlled facilities are unable to carry some or all emergency calls, it must immediately notify:</p> <p>(a) the emergency call person for 000 and 112 and the emergency call person for 106; and</p> <p>(b) each other carrier or carriage service provider in relation to whom the carrier or carriage service provider has an obligation to provide access under section 10.</p>	<p><b>Context:</b> In some cases, ESTA have previously detected faults in 000/112/106 calling by an associated drop in call volumes or errors in calling data provided to call takers.</p> <p><b>Recommendation:</b> Include a statement to cover the inclusion of automated monitoring and alerting to be in place to detect 000/112/106 faults immediately.</p> <p><b>Objective:</b> ESTA would like to see emergency call persons implement improved systems to automatically alert ESTA and other emergency service organisations when 000/112/106 faults arise, including communication of the level of alerting and possible detection delay times.</p>
<p>Division 2.5 31 Minimisation requirement — carriers and carriage service providers</p>	<p>(3) The steps are to:</p> <p>(a) monitor all calls made to the emergency service numbers 000 and 112, 24 hours per day, 7 days per week;</p> <p>(b) identify non-genuine calls;</p> <p>(c) stop high volumes of non-genuine calls to the emergency call service; and</p> <p>(d) document and implement a process for responding to an ECS disablement event.</p>	<p><b>Recommendation:</b></p> <ul style="list-style-type: none"> <li>• <b>Add:</b> (e) Take preventative action to limit calls before an incident Note: This may include network monitoring and security monitoring with automated controls.</li> </ul> <p><b>Objective:</b> ESTA recognises the need for specific preventative controls in addition to reactive controls be in place.</p>

<p>Division 3.7 60 Record keeping requirements (2) (a)(b)(c)</p>	<p>(2) The emergency call person for 000 and 112, and the emergency call person for 106, must make and keep records <b>for each day</b> of the following:</p> <ul style="list-style-type: none"> <li>(a) the number of calls that were answered by a call-taker 5 seconds or less after delivery to the relevant answering point for the call;</li> <li>(b) the number of calls that were answered by a call-taker 10 seconds or less after delivery to the relevant answering point for the call.</li> <li>(c) the number of calls that were answered by a call-taker more than 10 seconds after delivery to the relevant answering point for the call.</li> </ul>	<p><b>Recommendation:</b></p> <ul style="list-style-type: none"> <li>• <b>Change:</b> 'for each day' to 'for each hour'</li> <li>• <b>Add:</b> (d) Report the maximum wait time hourly</li> </ul> <p><b>Objective:</b> ESTA suggest ACMA understand the wait times associated with reaching Emergency Call Persons during busy periods (Afternoon periods, Friday Nights and Saturday Nights) rather than total daily periods which could mask performance issues during peak times.</p>
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## Recommendations for inclusion in current or future Determinations

Topic	Recommendation / Query / Concern / Opportunity
<p><b>Inclusions for IP Data Emergency Messaging Pilot</b></p>	<p><b>Situation:</b></p> <ul style="list-style-type: none"> <li>Emergency use cases: International experience and local research have identified an increasing numbers of cases where emergency callers are unable to readily or safely use voice calling - prompting the need to facilitate message-based communications to assist particularly vulnerable cohorts of callers. For example, this may assist the Deaf and hearing impaired; people experiencing domestic violence; aggravated burglary; and/or younger people with mental health emergency needs.</li> <li>Technology: Increasing complexity associated with the provision of voice services over nbn, 4G/5G, Wi-Fi calling and other underlying network technologies increases the risk likelihood of outages associated with these services.</li> </ul> <p><b>Recommendation:</b> Include a notice for network providers to:</p> <ul style="list-style-type: none"> <li>Provide recommendations and approaches for IP-based data communications (e.g. Emergency Services Live Chat) features that would be unrestricted by emergency users' data limits.</li> <li>End-user network providers, carriage providers to <i>begin</i> engaging with emergency call handing organisations to facilitate a viable nation-wide approach to message-based emergency services communications.</li> </ul> <p><b>Objective:</b> ESTA recognises the changing needs of emergency situations as communities change over time, specifically we have identified text-based messaging is required to meet these growing emergency situations. To ensure the emergency services community is able to offer a tested, robust and validated text-based emergency communication service – ESTA recommends early prototyping begin before being potentially mandated at a Federal or State level in a potentially inconsistent approach or implemented quickly in a manner that fails to meet community needs.</p>
<p><b>Emergency SMS Services</b></p>	<p><b>Situation:</b></p> <ul style="list-style-type: none"> <li>Twenty-nine countries offer 000 services via SMS (incl. New Zealand, Spain, Estonia, India)</li> <li>International experiences reflect the growing need to facilitate message-based communications to assist particularly vulnerable cohorts of caller. For example, this may assist the Deaf and hearing impaired; people experiencing domestic violence; aggravated burglary; and/or younger people with mental health emergency needs.</li> </ul> <p><b>Recommendation:</b></p> <ul style="list-style-type: none"> <li>Include statement to begin a pilot for emergency SMS services though cooperation with network operators and emergency service operators.</li> </ul>

	<p><b>Objective:</b> ESTA recognises the need to test both an IP data based messaging and SMS based messaging technique for communications in parallel as both technologies will present technical challenges that may delay or negate one of the selected communication technology types.</p>
<p><b>Large Call Volumes</b></p>	<p><b>Recommendation 1:</b> Mandate the <i>Emergency Call Person</i> have a defined number of call takers isolated from other States / Territory queues to allow continued call taking when other emergency service agencies are overwhelmed.</p> <p><b>Objective 1:</b> ESTA intends to avoid future cases where other States/Territory <i>Emergency Service Operators</i> have had delays in answering peak service demands, resulting in the <i>Emergency Call Person</i> to be unavailable to answer calls intended for ESTA as they are on-hold with other emergency service callers.</p> <p><b>Recommendation 2:</b> Enable the <i>Emergency Call Person</i> to leverage a highly scalable technology (e.g. IVR) to allow for self-selection of State or Territory by an <i>emergency caller</i> during excessive high volume or disaster-style events to reduce the impact to other States and Territories during these events.</p> <p><b>Objective:</b> While ESTA notes Recommendation 2 provides a technology solution as an example, ESTA welcomes the presentation of other viable means to achieve the goal of routing Victorian emergency service callers to ESTA in scenarios where the <i>Emergency Call Person</i> may be the bottleneck.</p> <p><b>Recommendation 3:</b> To ensure the <i>Emergency Call Person</i> maintains sufficient staffing levels, rather than relying on an IVR or experiencing delays – any process or solution changes would require hourly call SLA reporting and operational agreements with emergency service operators.</p> <p>This mechanism would require operational agreement on the thresholds to use between the <i>Emergency Call Person</i> and relevant states, territories or local authorities. (For example: Activated on verbal agreement between the Emergency Call Person on-duty manager and the ESTA on-duty operations manager)</p> <p><b>Objective 3:</b> Enable ESTA to continue to receive calls when <i>Emergency Call Persons</i> are overwhelmed (during emergency events) in a timely manner.</p>
<p><b>Non SIM Calls</b></p>	<p><b>Recommendation:</b> Providers of mobile phone services (3G/4G/5G) provide other uniquely identifiable information that may identify SIM-less handsets (e.g. IMEI, Modem serial number or other data that may be transmitted to mobile towers) for the purpose of identifying possible abuse.</p> <p><b>Objective:</b> Enable ESTA to flag repeat devices recently used for abuse / non-emergency calls to facilitate faster call-taking and resolution. ESTA have found some non-SIM calls to be abusive in nature to the operator – we take a zero tolerance stance on employee and emergency service worker abuse and use unique identification to address these risks.</p>

<p><b>Technology change decisions for operations</b></p>	<p><b>Recommendation:</b> Note a provision for <i>Emergency Call Persons</i> to engage with Emergency Service organisations early and frequently on technology changes and technology operations to ensure on-going continued operations.</p> <p><b>Objective:</b> ESTA wishes to avoid inconsistent communications and have sufficient time to react to technology change events. For example, moving from ISDN to SIP based technology in the future will require sufficient communication and engagement. SIP technology in particular is more prone to change and will require frequent and detailed communication between parties.</p>
<p><b>Operational Relationships and Engagement between Emergency Call Takers and Emergency Service Operators (e.g. ESTA)</b></p>	<p><b>Recommendation:</b> Inclusion of a statement that makes it mandatory for <i>Emergency Call Persons</i> to engage with emergency service operators (e.g. ESTA) on operational decisions and activities every month (at a minimum) with the purpose to improve operational stability, issue/fault resolution communications, improve customer experience and drive improved outcomes for emergency callers.</p> <p>Including, as example:</p> <ul style="list-style-type: none"> <li>- Future ability to explore adapting scripts by call origination (state)</li> <li>- Communication of events / outages / tech changes</li> <li>- Process, systems improvements and collaboration.</li> </ul> <p>These operational level meetings would be in addition to the quarterly TZCC (Triple Zero Coordination Committee) forums and focus on the detailed interactions between organisations.</p> <p><b>Objective:</b> Drive increased communication between <i>Emergency Call Persons</i> and emergency service operators to enable process improvement process performance monitoring and focus on providing the right customer experience levels for Emergency callers.</p>
<p><b>Adverse Event Management Process</b></p>	<p><b>Recommendation:</b> Inclusion of a statement that makes it mandatory for <i>Emergency Call Persons</i> to engage with emergency service operators (e.g. ESTA) to develop operational processes (reviewed every three months) to deal with adverse events (faults, high volumes, disasters, technology failures, people faults, caller abuse events). These operational level meetings would be in addition to the quarterly TZCC (Triple Zero Coordination Committee) forums and focus on the detailed interactions between organisations.</p> <p><b>Objective:</b> ESTA view the current level of adverse event management processes between Emergency Call Persons and Emergency Service Operators as open for improvement relative to the preferred community risk appetite.</p>
<p><b>Enabling Technology change</b></p>	<p><b>Recommendation:</b> Introduction of abatements or changes to funding for <i>Emergency Call Persons</i> that fail to deliver technology, process or people change events on-time.</p> <p><b>Objective:</b> ESTA recognises the changing technology (AML – Location identification, 5G, Wi-Fi calling, SIP calling) are built on technology platforms that change rapidly over time. Historically ESTA has not seen sufficient speed in the delivery of new technology services and changes. The risk of not adapting fast enough to technology change in the future may seriously undermine the stability and performance of emergency calling services.</p>

<p><b>Access to Data , Dashboards and reports by Emergency Service Operators</b></p>	<p><b>Recommendation:</b> Include a statement for ACMA and Emergency Call Persons to provide access to data, reporting, performance dashboards, availability/fault dashboards and performance data with Emergency service operators.</p> <p><b>Objective:</b> ESTA recognises the effective, efficient delivery of Emergency Service Operators is heavily dependent on well-informed decision-making based on timely, accurate and precise data/information.</p>
<p><b>Key person risk</b></p>	<p><b>Recommendations:</b> ACMA to be provided quarterly with an anonymised with a view of key person risks where a loss of key person(s) would impact the continued operation and quality of the Emergency Call Persons ability to enable end-to-end service continuity.</p>

## Clarification of responses

**Please contact:**

**Amee Morgans**

A handwritten signature in grey ink, appearing to read 'Amee Morgans', is positioned below the name.

Emergency Services Telecommunication Authority (ESTA)

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