



Rialtas na hÉireann  
Government of Ireland

# Emergency Call Answering Service

## Annual Review

### 2022

Prepared by the Department of  
the Environment, Climate and Communications  
[gov.ie/decc](https://www.gov.ie/decc)

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# 1 Introduction

The Emergency Call Answering Service (ECAS) is responsible for answering all 112 and 999 calls, SMS (texts) and eCalls, thus providing a vital link between the caller and the Emergency Services. The ECAS seeks to establish the Emergency Service being requested i.e., An Garda Síochána (AGS), Fire, Ambulance, Irish Coast Guard (IRCG) or, in emergencies involving aircraft, Irish Aviation Authority (IAA). The ECAS also determines the location of the caller for the purpose of routing the call to the most appropriate control centre for that Emergency Service. The call is then transferred to the appropriate Emergency Service, or in the case of SMS the messages are read to the Emergency Service Operator, who responds via the ECAS Operator, and then takes responsibility for the emergency. The ECAS Operators continue to monitor the call until it has been accepted by the Emergency Service.

## 2 Background

### 2.1 Basis for the Review

Section 58B of the Communications Regulation (Amendment) Act 2007 enables the Minister to enter a contract for the operation of the ECAS.

In 2018, following a public procurement process the contract was awarded to BT Communications Ireland Limited (BTCIL). This contract is for a period of seven years, expiring in November 2025.

The contract provides for an annual review of the performance of the ECAS Operator including:

- i. Relevant Performance Levels.
- ii. Performance capabilities, including those associated with advances in technology and methods used to provide the service.
- iii. Any other matters agreed for review.

This is the fourth annual review of the performance of the ECAS under the contract.

### 2.2 ECAS Funding

Emergency calls are free of charge to the caller<sup>1</sup>. The ECAS is funded through a Call Handling Fee (“CHF”) which is a fee payable by the telecommunications network operators and the telephone call service provider whenever a call is made to the 999/112. The Commission for Communications Regulation (ComReg) reviews and determines the maximum permitted CHF on an annual basis to ensure the reasonable costs of operating the service, both capital and annual running expenses, are recovered by the operator. Following the consultation process, based on the reasonable cost review ComReg set the CHF at €2.98 for the 12-month period from 12 February 2022 to 11 February 2023.

### 2.3 Incidents

#### Portronan

A Coroner’s inquest took place in Letterkenny Courthouse in May 2022 in relation to the fatal maritime incident which occurred in 2018 off Portronan Pier, Malin Head, Co. Donegal. As the

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<sup>1</sup> Regulation 5 of the European Communities (Electronic Networks and Services) (Universal Service and Users’ Rights) Regulations 2011

incident involved a call to the Emergency Call Answering Service, ECAS were called upon to provide evidence during the Coroners Court.

The inquest returned a unanimous verdict of accidental death, with the following four main recommendations.

1. To formally ask the Minister for Transport, Tourism and Sport for the mandatory training of all persons taking vessels to sea;
2. To educate all seafarers that a mobile phone is not an adequate radio communication device on its own and that VHF radios are deemed mandatory in all vessels taken to the sea for use in an emergency;
3. That education programs should continuously highlight not only the possession, but the wearing of lifejackets on vessels taken to the sea; and
4. To review the Maritime Code of Practice to remove any inconsistencies in the document and have it presented in a more user-friendly readable format for the average reasonable person.

## **ECAS Outage – June 2022**

The Emergency Call Answering Service was unable to handle emergency calls between 01.00 and 02.15 on 28 June 2022. The call handling operators were logged out of their stations and unable to log back in. The fallback 'auto-attendant' also failed to connect callers to the Emergency Services.

The ECAS technical team quickly identified an issue with a Server Certification used to facilitate internal communications on the ECAS platform (also on the auto-attendant). A valid certificate was applied, and the issue resolved.

## **Impact**

During the outage, 216 individual callers attempted to call 112 or 999, the ECAS system recorded details of these calls and their numbers were provided to An Garda Síochána. Callers were subsequently contacted by the Gardaí and those requiring assistance were identified and assistance provided by the relevant Emergency Service.

## **Remedial Plan**

A Remedial Plan was put in place between ECAS and the Department in line with the terms of the contract. ECAS identified a number of actions which were agreed and implemented. The Department requested that ComReg review the incident and the remedial plan to ensure that the

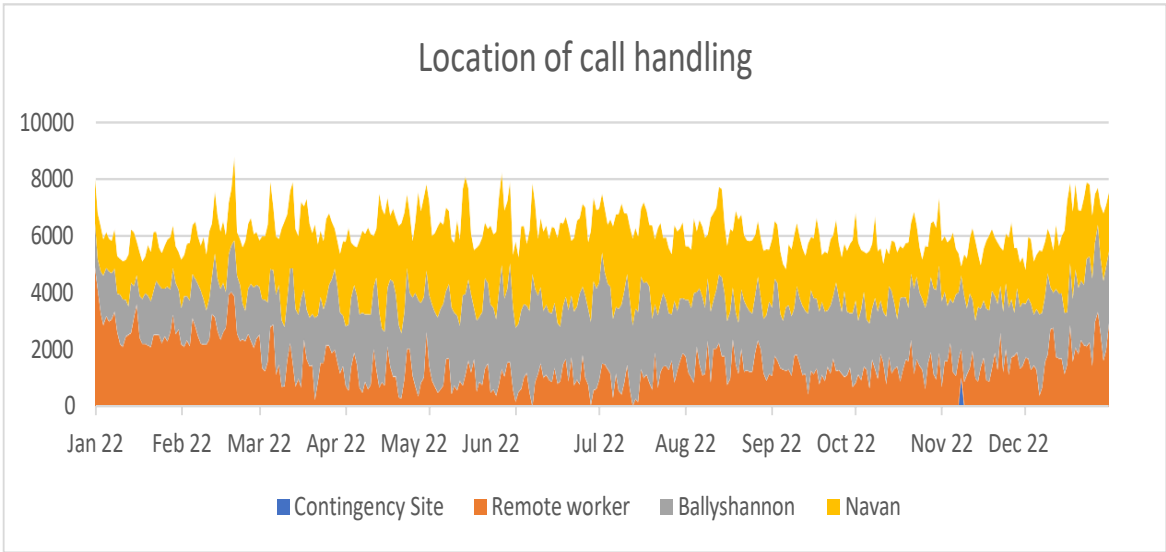
actions implemented were sufficient to prevent a reoccurrence of a similar incident. The Report concurred with the remedial actions implemented.

### 3 Remote Working

Throughout the Covid-19 pandemic and subsequent to the easing and ending of restrictions, the ECAS continued to take all necessary steps to ensure that services continued uninterrupted whilst also adhering to Government guidelines and ensuring the safety of all staff at all times. The ECAS IP network enabled staff to work remotely, and a number of staff continued to work from home during the period of this review.

Figure 1 outlines the locations from where calls were handled by the ECAS during 2022.

**Figure 1: Call handling locations**



## 4 Emergency Calls

### 4.1 Call Volumes

In 2022 the ECAS received a total of 2,170,929 calls which represented a decrease of 209,712 calls or almost 10% on the previous year. Several factors are driving this reduction, the two principal ones being:

- A change in fixed voice telephony subscription trends; and
- Technical changes on networks.

However, it should be noted that the number of calls connected to the Emergency Services increased by almost 21%.

**Table 1: Annual Call Volume 2017 – 2022**

Year	Volume of Calls
2017	1,807,568
2018	2,008,006
2019	2,320,970
2020	2,370,268
2021*	2,380,641
2022*	2,170,929

**\* Total call volumes including SMS messages and eCalls**

From 2017 to 2022 the average monthly call volume was approximately 181,366. In 2022 the monthly average was 180,911 calls, as illustrated in Figure 2 below.

**Figure 2: Monthly Call Volumes 2017-2022**

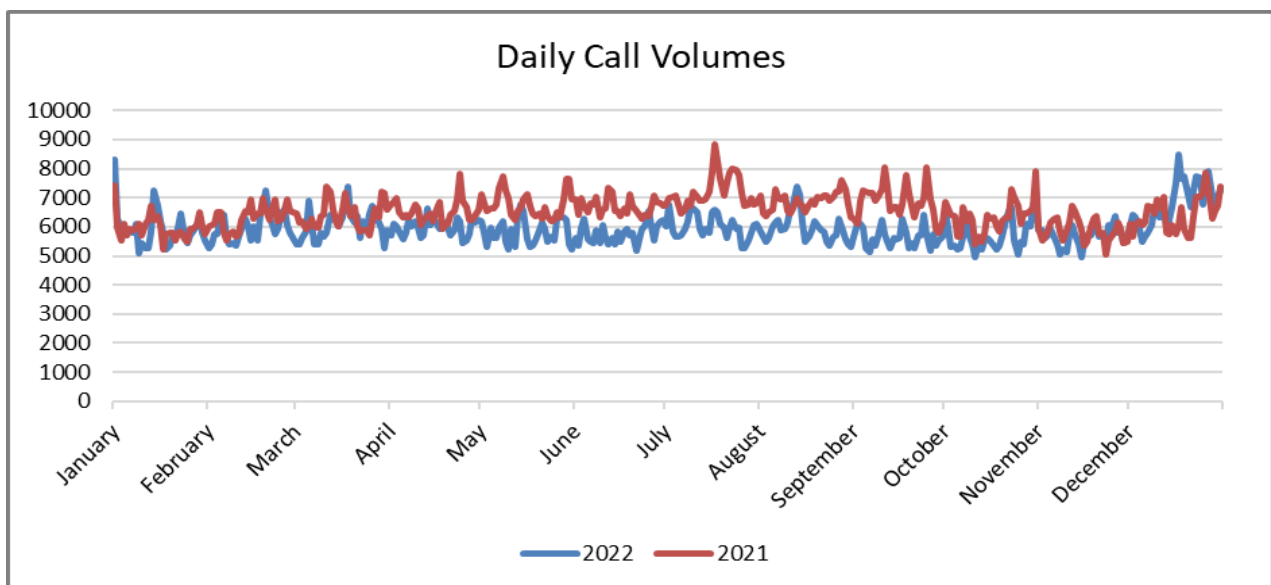
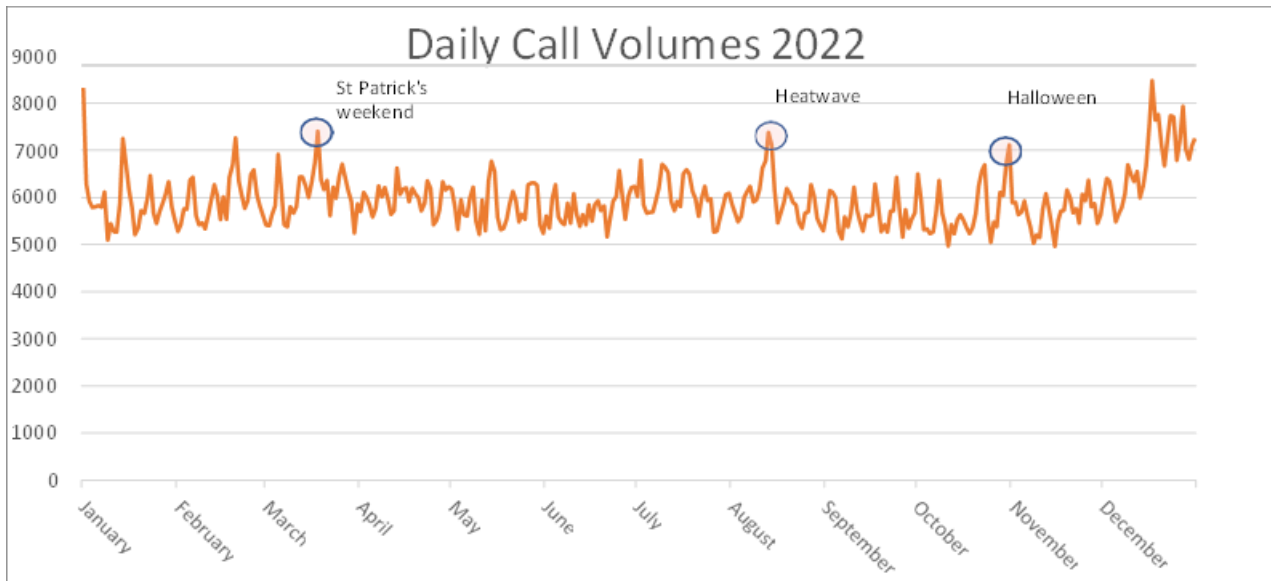




Factors such as atypical weather, flooding, holiday periods and even the number of weekends in a month has the potential to affect call volumes in any given month.

Figure 3 illustrates the variance in daily call volumes in 2022. Similar to 2021 adverse weather conditions (heatwave) and Halloween continue to be events which increase daily call volumes. December was also a very busy time for the ECAS, with almost 118,000 calls taken between 16 December and 31 December.

**Figure 3: Daily Call Volumes 2021 vs 2022**



## 4.2 Categories of Calls

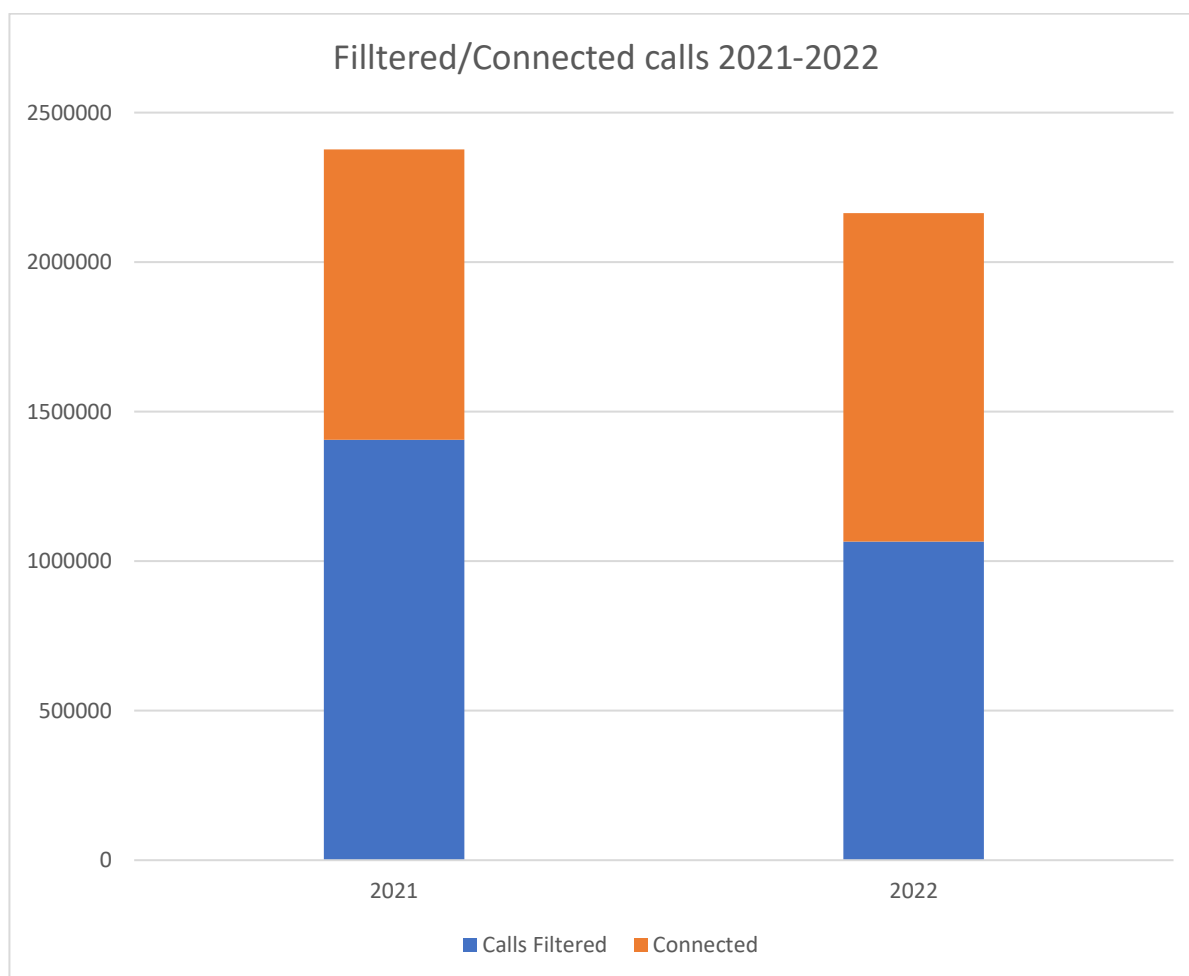
All calls to the ECAS are classified by category and a glossary of call classifications is set out in the Appendix.

In addition to “Normal” calls, which are calls where an Emergency Service is requested and are connected accordingly, a proportion of calls from other classifications (for example

“Silent Calls”) are also forwarded to the Emergency Services, adhering to strict procedures. In the past approximately 60% of all calls were filtered out annually. However, the decrease in “Noisy” calls, has resulted in a reduction of the percentage of calls being filtered (‘not connected to the Emergency Services’). In 2022 the percentage of calls filtered was 49.59% (59.2% in 2021) with 50.41% of calls connected to the Emergency Services (Fig.4).

While figures for 2022 show an overall decrease in call volumes, figure 4 shows an increase in ‘Normal Calls’ of over 13%.

**Figure 4: Filtered and Connected calls 2021 vs 2022**



In 2022, “Noisy Calls” saw a dramatic decrease of 11% in volume from the previous year, while “Abandoned” calls (a call that terminates before it can be presented to the next available ECAS Operator) decreased by 3% since 2021. “Silent Calls” saw a slight increase of 5%. Other call categories (for example “Non-ES Help”, “Cleared without speech”, “Misdials”) saw a marginal increase in 2022.

As recommended in the Bearing Point report of 2021, a review of the ‘Child Playing’ procedures was undertaken by ECAS. As there had been a noted decline in the number of “Child Playing” calls received over the past number of years, and the majority of these calls were connected to an Emergency Service (An Garda Síochána) in adherence with the procedures for such a call, a decision was made to remove this call category and follow the procedure for ‘Normal Calls’. A Change Request was submitted by the ECAS and the removal of the “Child Playing” call classification came into effect in Q4 of 2022.

There were 1,019,126 calls (46.9%) categorised as “Normal” calls and this represented an 8.8% increase on the number of “Normal” calls received in 2021. This increase coincides with factors such as the further easing of Covid restrictions, a rise in the population and increased economic activity.

**Table 2: Percentage Call Volume per Classification**

Call Classification	2017	2018	2019	2020	2021	2022
Normal Call	43.6%	42.0%	36.7%	34.7%	38.1%	46.9%
Silent Calls	38.1%	37.0%	32.9%	28.6%	27.6%	32.7%
Noisy Calls	7.6%	10.4%	16.6%	19.1%	15.9%	4.8%
Other	10.7%	10.6%	13.8%	17.5%	18.4%	15.5%

† Percentage totals may be subject to rounding

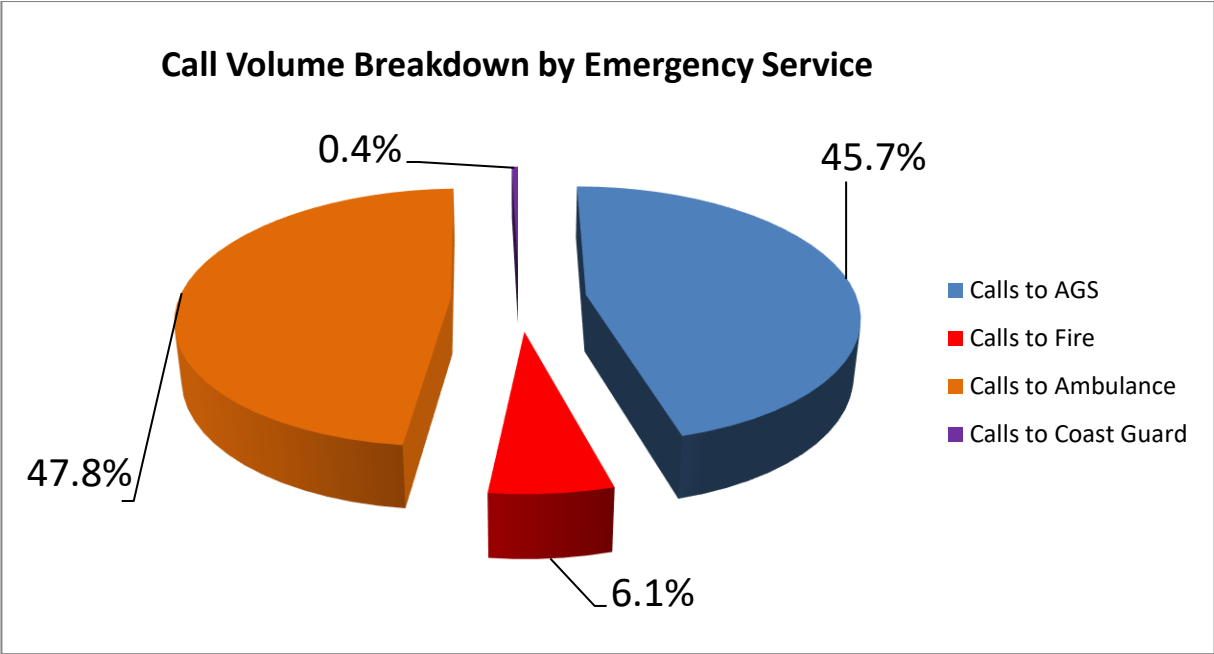
**Table 3: Call Volumes per Classification\***

Call Classification	2017	2018	2019	2020	2021	2022
Normal Call	786,531	841,417	852,888	823,871	905,925	1,019,126
Silent Calls	688,282	743,845	763,730	679,112	656,500	710,671
Noisy Calls	137,048	209,336	385,016	452,340	379,481	103,565
Other	193,095	213,300	321,594	416,291	438,735	337,567
<b>Total</b>	<b>1,804,956</b>	<b>2,007,898</b>	<b>2,323,228</b>	<b>2,371,614</b>	<b>2,380,641</b>	<b>2,170,929</b>

\* Total call volumes including SMS test calls and repeat SMS calls

In 2022 the majority of calls forwarded to the Emergency Services were connected to the Ambulance Service (48%) with An Garda Síochána receiving the next highest number of calls (46%). Fire Services and Coast Guard made up the remaining 6% of calls received.

Figure 5: Call Volume Breakdown by Emergency Service



## 5 Quality of Service

### 5.1 Overview

The ECAS has handled over 9 million calls since the commencement of the current contract. In that time, ECAS have filtered out over 5.3 million calls freeing up the time and resources of the Emergency Services to deal with genuine emergency calls.

The Minister and BT Ireland have agreed a set of KPIs (Table 4) to measure the performance of the services and system provided by the ECAS Operator. ECAS submit daily, monthly, and quarterly reports to DECC and ComReg in line with the terms of the contract.

Taking into account the outage in June 2022 ECAS availability for 2022 was 99.83%. The penalty regime in the contract for not achieving the threshold of 99.999% availability was applied.

The Department also carries out Monthly Audits of Emergency Calls, to monitor call handling procedures and quality of service. In 2022 ECAS achieved 99.74% call handling accuracy which is above the 99% threshold.

**Table 4: KPIs for 2022**

ID	KPI Title	Frequency	Performance Level	2022 average
1	ECAS Availability	Monthly	99.999%	99.986%
2	Missed Calls	Monthly	Zero missed calls during the measurement period	0
3	Standards Certification	Monthly	Valid / Current Certificate	Y
4	Potential Blocked Emergency Calls	Monthly	All available inbound capacity must not be fully utilised for more than two (2) seconds at any point throughout the Measurement Period.	0
5	Average Emergency Call Abandon Rate (excl. calls <1s)	Hourly & Daily	<5% of calls reported as a daily average.	0.28%
6	Average Speed of Answer	Hourly & Daily	<1.3s for 98% of calls reported as a daily average.	98.99%
7	Accessibility Index (Hit Rate)	15-minute intervals & Daily	95% of calls daily	96.72%*
8	Connected Call - Average Call Routing Time (excl. abandoned calls and unrouted calls)	Hourly & Daily	< 18 seconds for 90% of routed calls reported as daily average.	16.04s
9a	Average Call Handling Time – Connected calls excluding ES ring time	Hourly & Daily	<55 seconds reported as a daily average.	52.24s
9b	Average Call Handling Time – Calls Connected	Hourly & Daily	<60s reported as a daily average.	66.45s
10	Average Call Handling Time - Filtered calls	Hourly & Daily	< 20 seconds reported as a daily average.	19.59s
11	Transfer Accuracy	Monthly	<0.25% of hand offs routed to wrong Emergency Service	0.07%
12	Call Handling Accuracy	Random sample of 50 calls per ECAS Operator per month.	At least 99% per ECAS Operator Centre	Pass
13	Caller or Emergency Service complaints against ECAS.	Monthly	2 per month or 1 for every 200,000 calls	0

\*KPI 7 – Monthly figures - Accessibility Index (Hit Rate) fell to 94.22% in December 2022

## 5.2 Percentage of Calls Answered within 1.3 seconds.

The ECAS must answer 98% of calls within 1.3 seconds as per KPI 6 in Table 4 above. In 2022, an average of 98.98% of calls were answered within the 1.3 second target.

**Figure 6: Percentage of Calls Answered within 1.3 seconds throughout 2022**



## 5.3 Call Handling Time and Accessibility Index

Call handling time performance is monitored by a number of KPI's, which are set out in Table 4 (above). Connected calls take significantly longer to handle on average than other categories of calls due to the time taken to obtain details from the callers and ensuring the correct handover procedures are followed to accurately transfer the caller to the correct Emergency Services Control Centre.

KPI9 measures the average length of time taken from when an Emergency Call is answered by the operator until monitoring by the ECAS operator ceases. This KPI is reported on as follows:

KPI 9a excludes the time it takes the Emergency Services to answer (ring time) the emergency call, this provides a clearer measurement of ECAS performance. Calls were monitored for an average of 52.2 seconds which is within the performance level of 55 seconds.

KPI 9b includes the ring time, an increase in the time taken for Emergency Services to answer has resulted in the average 66 seconds not meeting the performance level of 60 seconds. The Department has taken actions to raise this with the relevant emergency services.

KPI 7, Accessibility Index (Hit Rate), requires that 95% of Emergency Calls are answered within 3 seconds measured in 15-minute intervals. The monthly average for this KPI in 2022 was 96.72%. However, the average Hit Rate in December 2022 decreased to 94.22%. The increase in ring time for ECAS to connect a caller to the Emergency Services is negatively impacting this KPI on a daily basis. This KPI is currently under review.

## 6 Service Enhancements

### 6.1 Advanced Mobile Location (AML)

AML is a technology that helps locating people automatically and accurately, it is used to supplement current methods of locating mobile callers who contact the Emergency Services. It works by automatically finding a smart phone's co-ordinates and once an accurate position is determined this information is sent directly to the emergency service via SMS.

The availability of AML on mobile emergency calls has steadily increased since its formal launch in Ireland in October 2017. In January 2022 AML for SMS on iOS (Apple) was rolled out.

ECAS received over 1.1m calls from mobile phones in 2022. AML was available on 62.42% of these phone calls and on an average of 37% of all SMS messages received.

### 6.2 eCall

eCall is an emergency call that is triggered either manually, by vehicle occupants, or automatically as soon as an in-vehicle sensor detects an impact from a serious collision. When activated, eCall establishes a voice connection with the ECAS.

A total of 7,072 eCalls were received in 2022. 490 of eCalls received were device initiated (activated automatically). 6,582 of eCalls received were activated manually. The total number of eCalls received in 2022 increased by 2,828 (67%) from those received in 2021.

All new types of cars and light commercial vehicles approved for manufacture after 31 March 2018, must have the 112-based eCall system installed. The ECAS system has the capability to enable it to receive and connect eCalls to the Emergency Services.

ECAS Operators spent a total of 107 hours dealing with eCalls in 2022.

### 6.3 Emergency Features for iPhone 14

#### Crash Detection

In 2022 Apple launched their iPhone 14 range of products, which contain motion sensors that can, combined with data from the device's barometer, GPS, and microphone sensors, detect severe crashes in common passenger vehicles.

When a severe crash is detected, the users iPhone or Apple Watch sounds an alarm and displays an alert. If the user is unresponsive an emergency call is made automatically. Automatic calls to ECAS are accompanied by an audio message that informs Emergency Services of the victim's location and search radius.



## **Emergency SOS via satellite**

On iPhone 14 and iPhone 14 Pro models with iOS 16.1 or later, the user can avail of an Emergency SOS via satellite to text emergency services. SMS via satellite is only available in an emergency situation where there is no phone signal, and the user has a clear line of sight to the sky. The message and latitude/longitude (geo-location) details will be sent via relay center to the ECAS.

## **6.4 112 Website**

In 2022 the '112.ie' Emergency Call Answering Service website was updated, and ownership of the site was transferred to the ECAS from the Minister for The Environment, Climate and Communications.

The new website provides information and answers 'frequently asked questions' in relation to 'Callers' (users of the ECAS) and 'Service Providers'.

## **7 Services for Persons with Disabilities**

### **7.1 112 SMS/Text**

The Department is committed to enabling access by persons with disabilities to the Emergency Services. The Department along with the ECAS regularly monitors advances in technology as part of a continuous improvement process to develop the 112/999 services, particularly for persons with disabilities.

The 112 SMS/Text was enhanced in 2019 to support AML technology on android devices allowing the ECAS to pass accurate location information, when available, to the Emergency Services. Support for AML SMS/Text was released by iOS (Apple) in January 2022. 112 SMS texts are free of charge to the texter. The requirement to pre-register for the service was removed in 2021.

#### **Limitations of 112 SMS/Text Service**

There are, however, some inherent limitations with the use of SMS/Text technology as it is not a real-time service with a guarantee of delivery. Therefore, if no reply is received to an SMS/Text within 2 minutes, the ECAS recommends that a texter sends a second 112 SMS/Text. However, it is advised that, if a person is in a position to make a voice call to 112 or 999, the person does so.

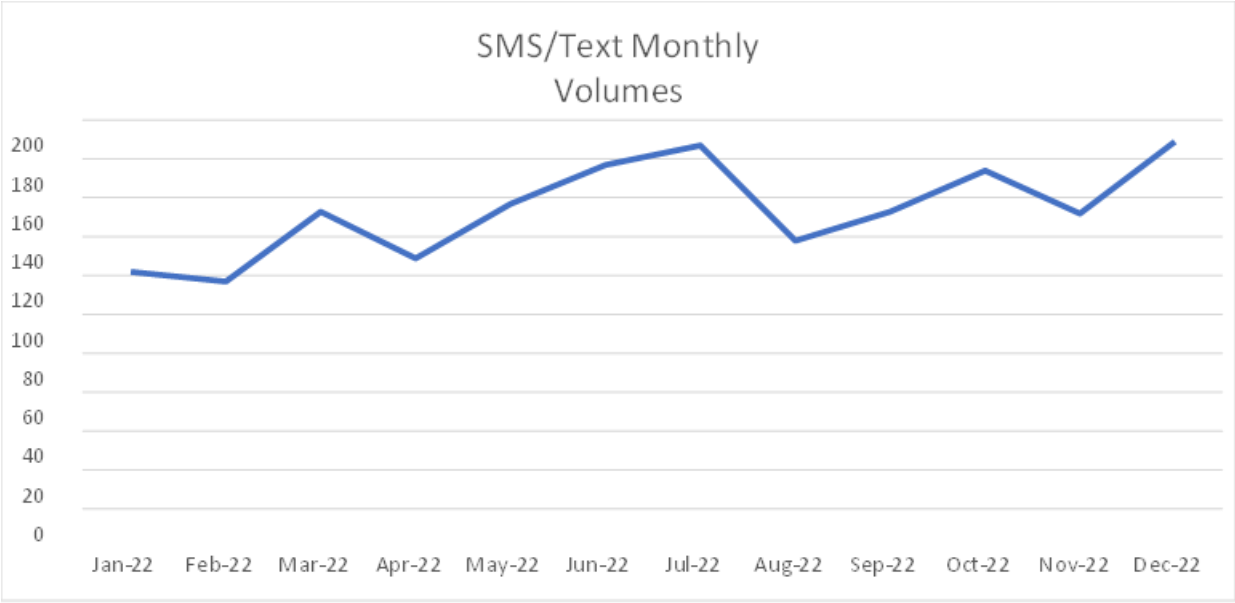
Over the coming years, new means of communicating with the ECAS will be facilitated to ensure compatibility, interoperability, quality, reliability, and continuity of emergency communications in the European Union. For example, 'Real Time Text' is a requirement to be provided by June 2025 under the 'European Accessibility Act'.

Further information is available on the website [112 Website - SMS Service](#)

### **7.2 SMS/Text Volume**

The ECAS handled 1,848 SMS/Text messages in 2022 and connected over 750 of these to an Emergency Service.

**Figure 7: Monthly SMS/Text Volumes for 2022**



## 8 ECAS Certification

The ECAS has secured and maintained the following certifications:

- **ISO9001** - sets out the steps necessary to adopt a quality management system. It is designed to help organisations ensure they meet the needs and expectations of both customers and other interested parties, based on internationally recognised quality management principles set out by the International Standards Organisation (ISO).
- **ISO27001** - sets out the requirements of information security management system. It is part of the ISO27000 family of standards relating to information and cyber security and offers a comprehensive set of controls, based on best practice in information security.
- **ISO22301** – is a global standard, which provides a documented management framework to protect against or reduce the likelihood of occurrence of disruptive events and to prepare for, respond to, and recover from such disruptive incidents when they arise.

There has not been any audit related to ISO9001 during the period of this review.

## 9 Governance

The ECAS is managed through a number of forums: the ECAS Emergency Services, the ECAS Liaison and the ECAS Industry Forum. Each group meets quarterly throughout the year.

The **ECAS Emergency Services Forum** acts as the Project Board for the ECAS and is chaired by the Department. It consists of representatives of An Garda Síochána, the National Ambulance Service, the Fire Service, the Irish Coast Guard, the Irish Aviation Authority, the Department of Housing, Local Government and Heritage and the ECAS. Its role is to act as an advisory board and advise the Minister for the Environment, Climate and Communications on the management of the Emergency Service Answering Service.

The **ECAS Liaison Forum** consists of officials from the Department and the management team of ECAS. They review operational performance, operational matters arising, and service enhancements.

The **ECAS Industry Forum** is chaired by ComReg and consists of representatives of ComReg, the Department, the ECAS Operator and the Telecoms Industry. It is chaired by ComReg and facilitates discussion on telecommunications issues relating to the ECAS.

## Appendix

Call Classification	Definition	Speech Present?
<b>Normal</b>	A normal call where a person makes a service request and the call is connected to an Emergency Service	Yes
<b>Cleared Without Speech</b>	A call where the caller clears the call without making a service request	No
<b>Silent Calls</b>	A call which remains open without the caller speaking. These calls are triaged according to the Silent Calls procedures	No
<b>Noisy Calls</b>	A false call which is generated on a fixed line network, which tend to be weather related	No
<b>Abusive</b>	A call from members of the public that are abusive to the ECAS Operator where no request for an Emergency Service is made	Yes
<b>Non-ES Help</b>	A call where the caller makes a request for a service outside of the four named Emergency Services	Yes
<b>Misdials</b>	A call where the caller indicates that they have made an error in calling the ECAS	Yes
<b>Customer Cancels</b>	A call where the customer speaks and cancels the call	Yes
<b>Abandoned</b>	A call that terminates before it can be presented to the next available ECAS Operator	No