Roinn Cumarsáide, Gníomhaithe
ar son na hAeráide & Comhshaoil
Department of Communications,
Climate Action & Environment

Emergency Call Answering Service

Annual Review 2016

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1 Introduction

The Emergency Call Answering Service (ECAS) is responsible for answering all 112 and 999 calls, providing a vital link between the caller and the Emergency Services. Its role is to respond to all incoming calls and texts, identify and pass the call through to the appropriate Emergency Service (Garda, Fire, Ambulance or Coast Guard and, in cases involving aircraft, Air Traffic Control).The ECAS operators continue to monitor the call until it has been accepted by the emergency service.

2 Background

2.1 Basis and Purpose of the Review

Section 58B of the Communications Regulation Act 2002 (the 2002 Act) enables the Minister to enter a contract for the operation of the ECAS.

The contract to operate the Emergency Call Answering Service was awarded to BT Ireland in 2009, following a public procurement process and BT commenced operations on 14 July 2010. The concession agreement was for an initial period of 5 years, with options to extend the agreement by up to two years. The options to extend were exercised and in accordance with the terms of the Concession Agreement, continuation services are being provided by BT to facilitate the completion of the procurement process and transition to a new ECAS Concession Agreement.

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

(i) An assessment of the Key performance indicators set down in the agreement;

(ii) Performance capabilities, including those associated with advances in technology and methods used to provide the Services;

(iii) Analysis of the quality of service provided.

2.2 ECAS Funding

Irish legislation[1] provides that emergency calls are free of charge to the caller. The 2002 Act provides the legal basis for the funding of the ECAS by providers of electronic communications networks or services. A Call Handling Fee (CHF) for every emergency call is imposed on the service provider on whose network the call originates. Section 58D 2002 Act obliges and empowers the Commission for Communications Regulation ("ComReg") to review and determine the maximum permitted Call Handling Fee ("CHF") on an annual basis to ensure the reasonable costs of operating the service, both capital and annual running expenses, are recovered by the ECAS Operator. In January 2016, having concluded its annual review, including a public consultation, ComReg set the maximum permitted CHF at €3.82 for the year 12 February 2016 to 11 February 2017. This was unchanged from 2015.

[1] Regulation 5 of the European Communities (Electronic Networks and Services) (Universal Service and Users' Rights) Regulations 2011

3 Call Volumes

3.1 Call Volumes

ECAS received a total of 1,761,166 calls in 2016. The total volume of calls has continued to decrease year on year, with an overall reduction of 1,469,097 calls between 2010 and 2016.

Table 1: Annual Call volume 2010 – 2016

Year	Volume of Calls
2010	3,230,263
2011	2,833,804
2012	2,802,406
2013	2,684,324
2014	2,149,445
2015	1,860,335
2016	1,761,166

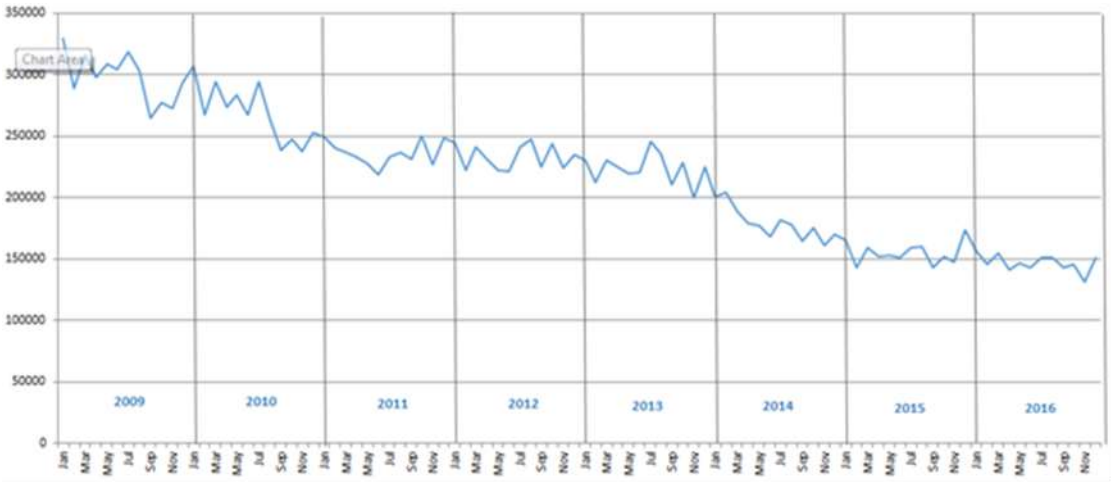
The reduction in call volumes is primarily due to:

a) Reduced calls being received in ECAS due to faulty telephone lines and

b) Changes in the design of mobile handsets and the significant increase in the use of smartphones in Ireland which make it more difficult to accidentally dial 112/999. Previous handset design had caused inadvertent calls to be put through to the ECAS.

Table 3 hereunder shows the downward trend of call volumes from 2009 to 2016 on a monthly basis. Factors such as weather, flooding, holiday periods and the number of weekends in a month can greatly influence monthly call volumes. It would appear when reviewing 2015 and 2016 that the volumes are plateauing at approximately 150,000 calls per month.

Figure 1: Call Volumes 2009- 2016



3.2 Categories of Call

Calls to ECAS are classified into categories, a glossary of which is set out in Appendix 1. Table 3 provides a percentage breakdown of call volumes by category since 2010.

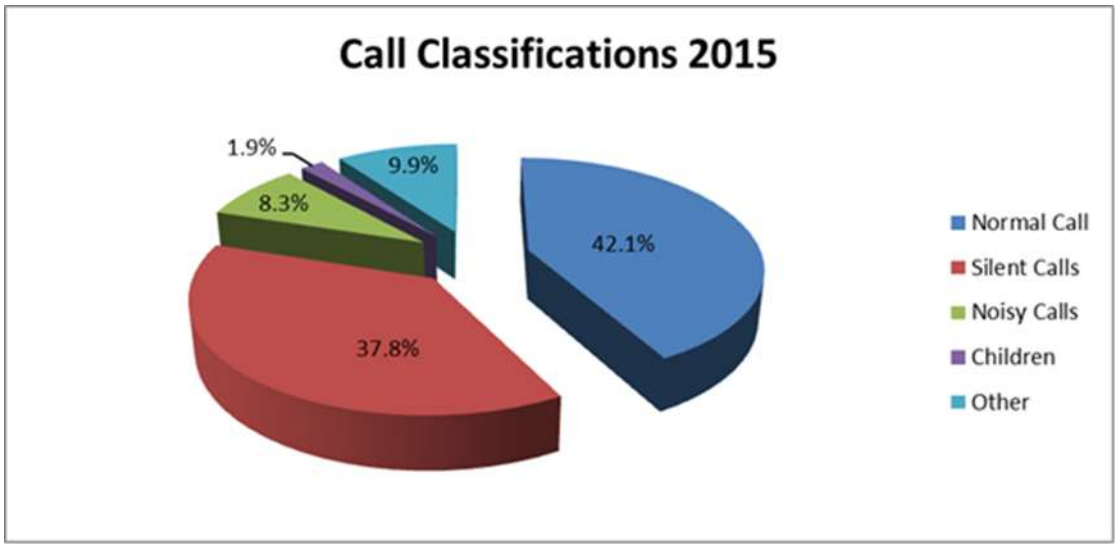
Table 2: Percentage Call Volume per Classification

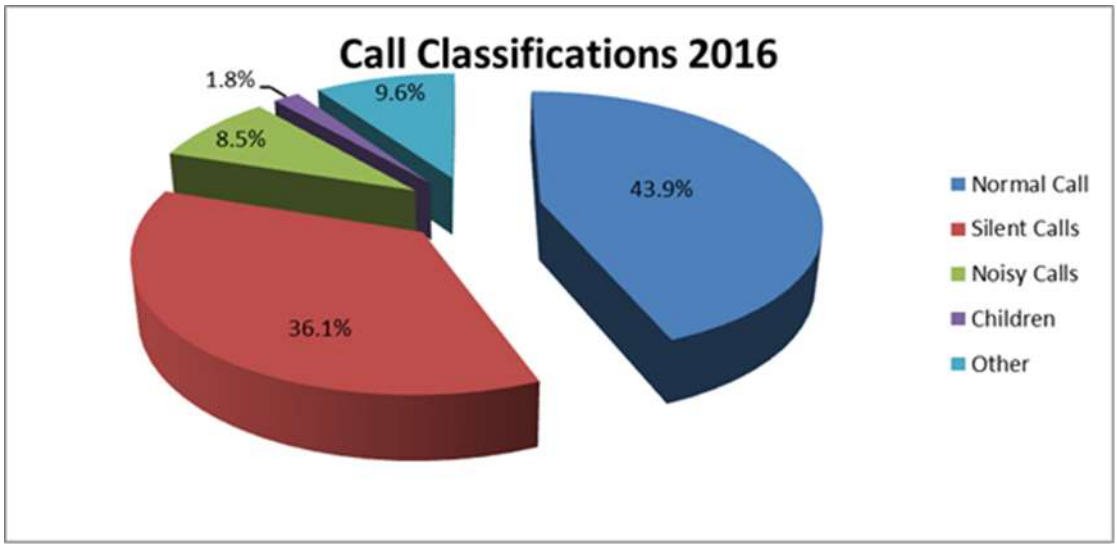
Call Classification	2010	2011	2012	2013	2014	2015	2016
Normal Call	31.2%	30.4%	28.9%	30.7%	36.8%	42.1%	43.9%
Silent Calls	48.5%	52.0%	55.8%	49.5%	43.2%	37.8%	36.1%
Noisy Calls	8.0%	5.4%	4.7%	7.4%	7.6%	8.3%	8.5%
Children playing	2.7%	3.0%	2.4%	2.1%	2.4%	1.9%	1.8%
Other	9.6%	9.2%	8.2%	10.2%	10.1%	9.9%	9.6%

In 2016, approximately 775,000 calls were categorised as normal calls; these are calls in which a caller directly requested a specific emergency service and is connected accordingly. The number of normal calls has relatively stable since 2011.

The other classifications of calls have generally experienced a decline over the past number of years. The “Silent Calls” category (calls to the ECAS which remain open without the caller speaking) has shown the largest reduction, with a decrease of over 915,000 calls (59%) between 2010 and 2016.

Figure 2: Call Classification 2015 vs 2016

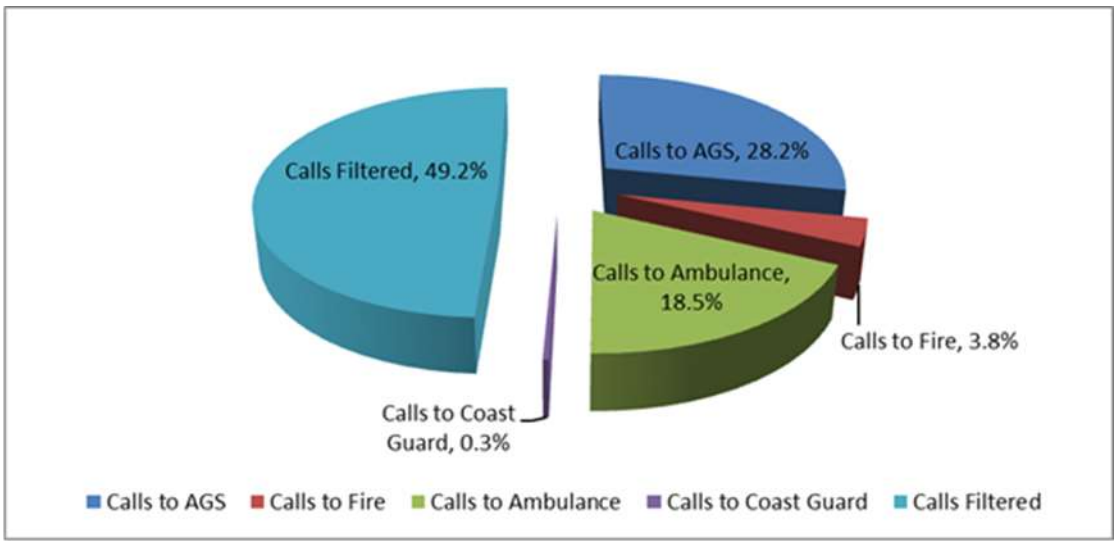




3.3 Call Volume Breakdown by Emergency Service

The overall breakdown of calls connected to the Emergency Services remains constant year-on-year with approximately 49% in 2016 (50% in 2015) of all calls filtered out annually, with the remainder being connected to the Emergency Services. In addition to Normal calls listed in table 3 above, a proportion of calls from other classifications (e.g. silent calls) are also forwarded to the Emergency Services bringing the total percentage of connected calls to 50.8%.

Figure 3: Call Breakdown per emergency Service



4 Quality of Service

4.1 Overview

The ECAS has performed to a consistently high standard and, with the exception of average call handling time (see below), has exceeded the performance levels set out in the Concession Agreement. It has handled over 15 million calls since its launch in July 2010. In that time, it has filtered out over 8 million calls freeing up emergency services time and resources to deal with genuine emergency calls.

The service has been available 24 hours a day, 365 days a year since it was launched in July 2010. The average speed of answer for a caller to ECAS in 2016 was 0.75 seconds, this puts ECAS among the best performing countries in the EU[2] with more than 90% of calls answered within 10 seconds.

Calls are routed to the Emergency Services with details of the emergency and the location of the caller within an average of 7.71 seconds. The ECAS has a target of 99% call handling accuracy which it continuously achieved, averaging at 99.6%.

Table 3: ECAS Key Performance Indicators for 2016

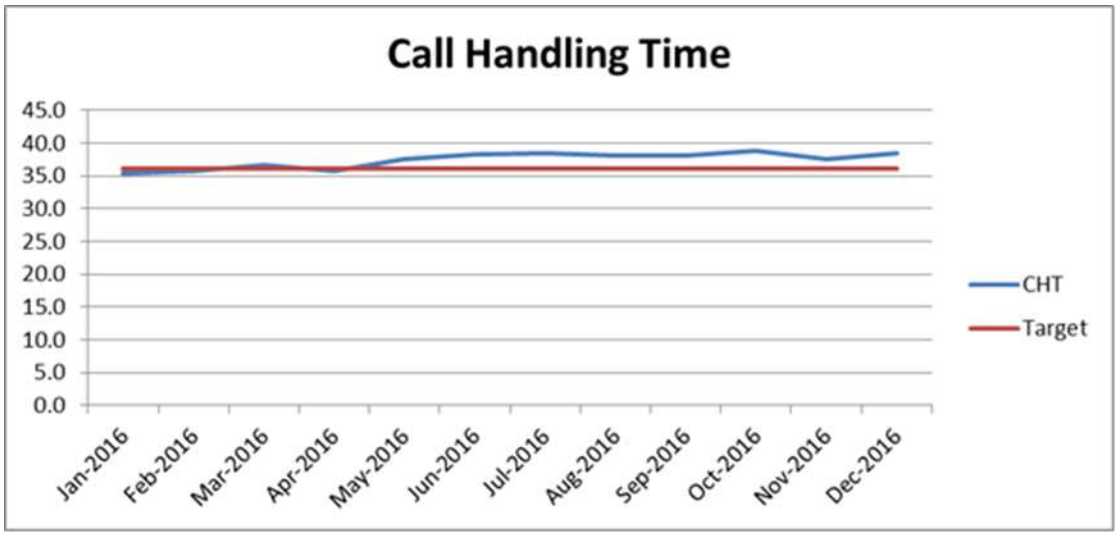
ECAS KPI	Threshold	Measurement Period	Outcome
ECAS Availability	99.999%	Rolling 12 month	100.00%
Average Speed of Answer	1.3 seconds	Per Day	0.75 secs
PAC 5	97.5%	Per Day	98.94%
Accessibility Index (Hit rate)	85%	Per Day	99.34%
Complaints (total)	2	per month or 1 for every 200,000 calls	0
Standards certification	Certificate Inspection	Annual	Yes
Average Call Handling Time	36 seconds	Per Day	37.39 secs
Average Call Routing Time	Less than 15 seconds for 90% of routed calls.	Per Day	7.71 secs
Average Call Abandon Rate	< 12%	Per Day	5.48%
Call Handling Accuracy	99%	Monthly	99.56%

[2] https://ec.europa.eu/digital-single-market/en/news/implementation-european-emergency-number-112-results-tenth-data-gathering-round

4.2 Call Handling Time

The Call Handling Time measures the length of the call from the time the ECAS operator answers the call until the termination of the conversation between the Caller and the Emergency Services operator. Connected calls take significantly longer to handle on average than other categories of call due to the time taken to obtain details from the callers, and ensuring the correct handover procedures are followed to accurately transfer information relating to an emergency incident to the Emergency Services operator. Therefore, as the number of silent calls has decreased significantly over the lifetime of the Concession Agreement, there has been a general upward trend in the average call handling time. So although the target threshold set for call handling time was not achieved in 2016, there was no adverse impact in terms of the response to connected calls.

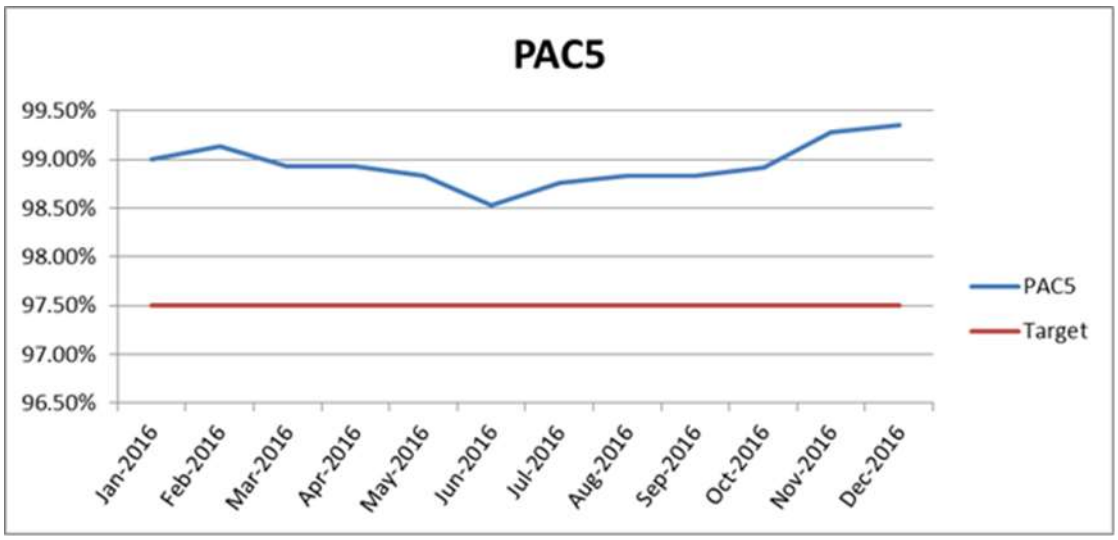
Figure 4: Call Handling Time 2016



4.3 Percentage of Calls Answered within 5 seconds (PAC5)

ECAS must answer 97.5% of calls within 5 seconds. In 2016, ECAS exceeded the requirements of PAC5 with 98.94% of calls being answered within 5 seconds.

Figure 5: Percentage of Calls Answered within 5 seconds



4.4 Employee Relations

While BT leads on the delivery of the Emergency Call Answering Service, call takers are employed by Conduit Global. Conduit Global engages and consults directly with its employees. On the 25th February 2016 and the 7th April 2016, ECAS staff who were members of the Communications Workers Union undertook industrial action in the form of 12 hour work stoppages.

BT implemented a contingency plan, approved by the Department in consultation with the Emergency Services, which ensured all three Emergency Call Handling Service centres in Donegal, Dublin and Meath were open and operational with additional trained call takers. A fourth centre was also activated to provide further resilience. The Department maintained in close contact with BT throughout the dispute to ensure that the service to the public was not affected in any way and there was no negative impact on the delivery of the service during this period.

Conduit Global and the Communications Workers have entered into an industrial Relations process in the Workplace Relations Commission and Labour Court, the adjudication is expected in 2017.

5 Service Enhancements

Two major initiatives were initiated in 2016 which will improve the ability of ECAS to provide additional location information of callers to the Emergency Services.

5.1 Eircodes

In 2016 the ECAS system was upgraded to include Eircodes. ECAS can now accept an Eircode from a caller, confirm the location via the internal look up facility and present the location information to the Emergency Services.

5.2 Advanced Mobile Location (AML)

AML is a mobile phone technology to supplement current methods of locating mobile callers who contact the Emergency Services on 112 or 999. Traditionally, when a mobile phone user called the emergency services and was unsure of, or unable to communicate, their location, the only information available to the emergency services was the location of the mobile mast to which the call connected. In most cases this represents an area of several km2 and in some cases this could be in excess of 100 km2.

AML uses the location capabilities available in Android mobile phones when an emergency call is made and sends this location automatically to the Emergency Services. AML is a cost effective technique which can provide a far greater degree of accuracy for the caller's location than was previously available. In most cases, this can be expected to be within 50 meters of the user's actual location where a GPS or Wi-Fi fix is established and in instances where a good GPS has been secured, within 10 meters. A pilot project was commenced in ECAS in 2016 regarding the introduction of AML for Android smartphones.

The pilot was completed and AML was formally launched in October 2017.

5.3 Promotion of 112

ECAS was represented at the BT Young Scientist Exhibition in the RDS in January 2016. At this event in conjunction with the Emergency Services it promoted and publicised 112 to the wide and very diverse audience.

ECAS also gave presentations throughout the year to interested parties to explain the service and promote the use of 112.

6 Services for Persons with Disabilities

6.1 112 SMS

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

Ireland was one of the first countries in Europe to provide an SMS service to access emergency services and since 2012 persons in Ireland may use SMS text messaging to contact ECAS. Although not exclusively for persons with disabilities, the service enables persons, in particular those who may be deaf, hard of hearing or speech-impaired to send SMS text messages to the ECAS. Another benefit of SMS is that it doesn't need the same quality of reception and may often function in areas of poor quality mobile coverage. Recent enhancements in the service have enabled the processing of multi-part texts. This means that incoming texts which span more than one message are now presented in the ECAS as one single message. This has resulted in significant improvements to the speed and accuracy with which such emergency texts can be processed and delivered to the Emergency Services. These 112SMS texts are free of charge to the texter.

Users of this service should preregister for the service on the website https://www.112.ie/.

6.2 Limitations of 112 SMS Service

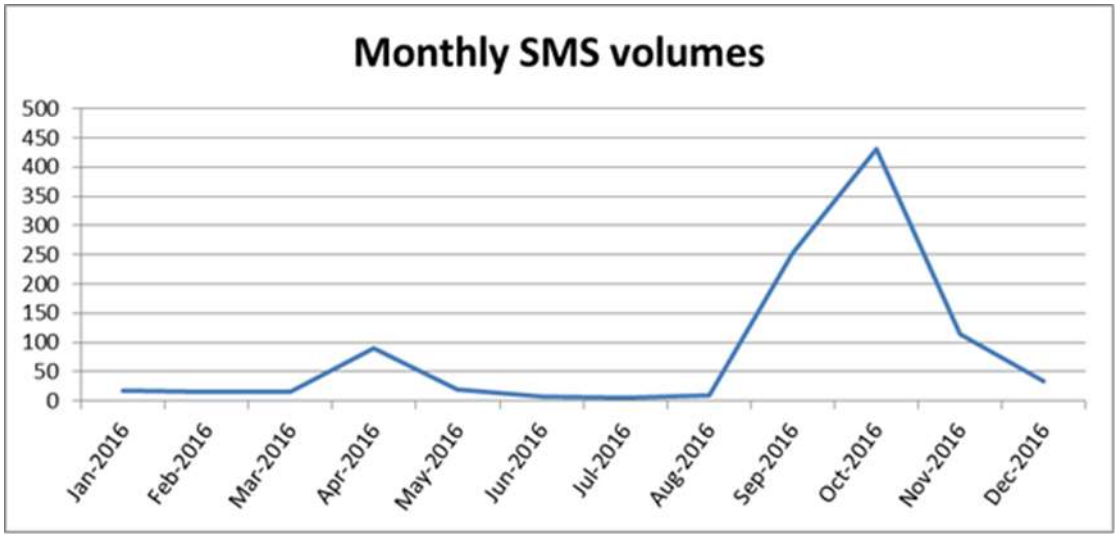
There are, however, some inherent limitations with the use of SMS technology as it is not a real-time service with a guarantee of delivery. Therefore, if no reply is received to an SMS within 3 minutes, the ECAS recommends that a texter sends a second 112SMS. However, if a person is in a position to make a voice call to 112 or 999 the ECAS recommends that the person does so.

Further information is available on the website https://www.112.ie/112_SMS_Service/142

6.3 SMS Volume

ECAS handled 1,012 112SMS messages in 2016 receiving approximately 25 genuine messages per month.

Figure 6: Monthly SMS Volumes for 2016



6.4 Minicom 112

ECAS also manages the 112minicom service. The service enables persons with a Minicom device to contact ECAS in the event of an emergency.

7 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).
- **ISO27001:2013** - sets out the requirements of information security management system. It is part of the ISO 27000 family of standards relating to information and cyber security and offers a comprehensive set of controls, based on best practice in information security.
- **ISO22301:2012** - helps you to understand and minimise the risks of challenging and unexpected disruptions, actively promoting to all that you are prepared thus protecting your business, staff, reputation and future.

8 Governance

The ECAS Service is managed through a number of forums: the ECAS Emergency Services Group, the ECAS Liaison Committee, the ECAS Industry Forum and the ECAS Operator Forum. Each group meets at regular intervals throughout the year and all meetings are minuted.

The **ECAS Emergency Services Group** acts as the Project Board for the ECAS and is chaired by the DCCAE. It also 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, Planning, Community and Local Government and the ECAS Operator. Its role is to act as an advisory board and advise the Minister for Communications, Climate Action and Environment on the management of the Emergency Service Answering Service. It meets quarterly.

The **ECAS Liaison Committee** is chaired by DCCAE and consists of representatives of DCCAE and the ECAS Operator. The Liaison Committee meets quarterly and considers operational performance, operational matters arising, and service enhancements.

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

The **ECAS Operator Forum** is a forum for the telecoms operators to present matters relating to operational aspects of the ECAS to DCCAE including proposals for changes in procedures to improve handover to Emergency Services and enhance the quality of service to callers.

DCCAE also carries out monthly call operational audits at the ECAS centre which form the basis for operational reviews.

Appendix

Call Classification	Definition	Speech Present?
Normal	A normal call where a person makes a service request and the call is connected to an Emergency Service	Y
Cleared Without Speech	A call where the caller clears the call without making a service request	N
Silent Calls	A call which remains open without the caller speaking. These calls are triaged according to the "Silent Call" procedures	N
Noisy Calls	A false call which is generated on a fixed line network, which tend to be weather related;	N
Children Playing	Calls from children that are triaged in accordance with the Young/Old Child/ Adult Playing procedures	Y
Abusive	A call from members of the public that are Abusive to the ECAS Operator where no request for an Emergency Service is made	Y
Non ES Help	A call where the caller makes a request for a service outside of the four named Emergency Service	Y
Misdials	A call where the caller indicates that they have made an error in calling the ECAS	Y
Customer Cancels	A call where the customer speaks and cancels the call	Y
Abandoned	A call that terminates before it can be presented to the next available ECAS Operator	N
Text Devices & Relay Services	Calls that present to the ECAS Operator via the Text Relay interface or are received by the ECAS Operator as a phone call from a registered Relay Service	N
Connected	Any call that is connected to the Emergency Services, this includes normal calls and calls connected due to procedure i.e. every 3rd silent call	Y/N