BS 8484:2016

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Provision of lone worker services – Code of practice

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 August 2016. It was prepared by Subcommittee GW/3/-/12, *Protection of lone workers*, under the authority of Technical Committee GW/3, *Private Security Management & Services*. A list of organizations represented on these committees can be obtained on request to their secretary.

Supersession

This British Standard supersedes BS 8484:2011, which will be withdrawn on 28 February 2017.

Relationship with other publications

At the time of publication, there are several standards for alarm receiving centres (ARCs) available:

- the BS EN 50518 series;
- BS 8591;
- BS 5979:2007.

As a result of the publication of the BS EN 50518 series, BS 5979:2007 was withdrawn, but suppliers may wish to continue using ARCs which conform to BS 5979:2007.

Information about this document

This is a full revision of BS 8484, and introduces the following principal changes:

a) revised definitions;

b) revised structure including:

   1) customer considerations for the supplier; and

   2) information on management and training;

c) an improved self-certification process for lone worker devices and lone worker applications which puts the responsibility for effective self-certification onto the supplier; and

d) allowance for the emergence of safety applications for mobile communication devices.

This British Standard remains a service standard enabled by the integration of a variety of existing technologies.

An employer's duty of care extends to wherever an employee might be called upon to perform their duties. This British Standard applies both within the UK and outside of the UK.

This British Standard applies to lone worker devices, lone worker applications, and all of the supporting monitoring and customer support services. This British Standard also acknowledges that these are part of an overall lone worker protection strategy.

It is increasingly common for customers to integrate lone worker services with their health and safety, security or governance, risk management and compliance (GRC) policies to mitigate risk to their organization and to their lone-working staff. Compliance with this British Standard promotes the most effective use of resources while maintaining a good level of support for lone workers.

This British Standard aims to ensure only verified alarms are passed to the response services.

Use of this document

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is "should".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

The word "should" is used to express recommendations of this standard. The word "may" is used in the text to express permissibility, e.g. as an alternative to the primary recommendation of the Clause. The word "can" is used to express possibility, e.g. a consequence of an action or an event.

Notes and commentaries are provided throughout the text of this standard. Notes give references and additional information that are important but do not form part of the recommendations. Commentaries give background information.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

In particular, attention is drawn to the following:

a) The Corporate Manslaughter and Corporate Homicide Act 2007 [1]

b) The National Police Chiefs Council (NPCC), Security Systems Policy, Appendix V [1)] [2]

c) INDG 73, *Working Alone – Health and safety guidance on the risks of lone working* [3]

d) The Rehabilitation of Offenders Act 1974 [4]

e) The Data Protection Act 1998 [5]

f) The Health and Safety at Work etc Act 1974 [6]

g) The Telecommunications Act 2003 [7]

[1)] Police Scotland Security Systems Policy is currently being reviewed.

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0 Introduction

0.1 General

This British Standard provides recommendations for lone worker services (LWSs) for customers who have identified a level of risk to their lone workers (LWs). This British Standard recognizes two broad categories of risk that affect LWs: environmental risk (see **3.1.6**); and people risk (see **3.1.14**).

0.2 Overview of lone worker protection

Considering employee safety and security at a strategic level leads to a culture of safety at work at the operational level. LW protection might be a consideration for both safety and security strategies. It contributes to the organization's governance, management of risk and compliance with both company policies and legal obligations.

NOTE 1 Attention is drawn to The Corporate Manslaughter and Corporate Homicide Act 2007 [1].

Matters for consideration in LW employee protection strategies can include:

a) how to establish a culture of safety so that employee protection becomes an integral part of daily operational activities;

b) assessing risk, both anticipated risk and dynamic risk; and

c) creating and reviewing LW protection policy, including management responsibilities.

A policy can include:

1) establishing which employees are LWs, either occasionally or for the majority of their employment;

2) conferring with LWs; and

3) devising appropriate procedures to protect employees when they are away from direct supervision.

These procedures are directed towards:

i) avoiding incidents (dynamic risk assessments);

ii) managing incidents;

iii) calling for help when necessary;

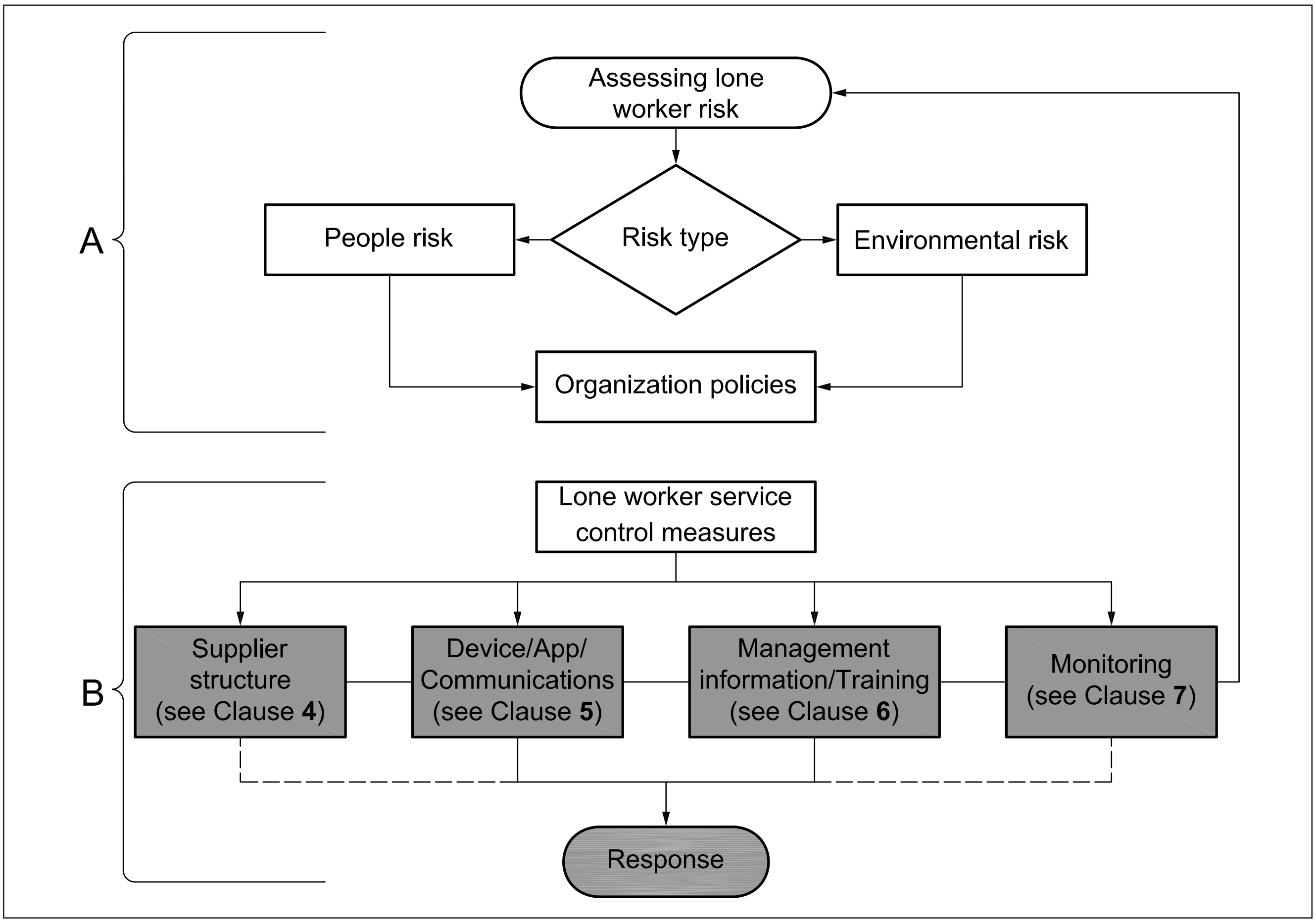
iv) training; and

v) management of LWs.

Implementing such procedures results in embedding LW safety in an organization's operations.

NOTE 2 Figure 1 gives an overview of the process of protecting LW employees where control measures include an LWS. Part A shows how an organization's LW policy can be developed and part B shows the contribution of the LWS.

Figure 1 **Overview of lone worker protection including a lone worker service**


A
Assessing lone worker risk
People risk
Risk type
Environmental risk
Organization policies
B
Lone worker service control measures
Supplier structure (see Clause 4)
Device/App/ Communications (see Clause 5)
Management information/Training (see Clause 6)
Monitoring (see Clause 7)
Response

The supplier provides management information to the customer to aid compliance with the customer's LW policy. Recommendations are given in Clause **6**.

A lone work device (LWD)/lone worker application (LWA) encourages and forms part of an LW dynamic risk assessment. In the event of an incident, it enables the LW to transmit their identity and location easily and discreetly in order to request assistance when they feel threatened or at risk. Recommendations are given in Clause **5** and Clause **6**.

Recommendations for training for the customer, LW and supplier's employees, as well as recommendations for training for the alarm receiving centre (ARC) operators are given in Clause **6**.

ARCs establish and verify the severity and nature of the incident and pass on all relevant information to the appropriate response services. Recommendations are given in Clause **7**.

The types of response available are shown in Clause **8**.

The lone worker alarm activation process is shown in Annex A.

If a customer decides that a police response is required to form part of the LWS, customers can consult the requirements from police forces in England, Wales and Northern Ireland, which can be found in Appendix V of the Police Response to Security Systems Policy [2].

1 Scope

This British Standard gives recommendations for providing for the safety and security of lone working employees where the customer's risk profile identifies the need for an LWS.

This British Standard gives recommendations on the provision of LWSs to help control and manage identified LW risks. Such services consist of an LWD and/or an LWA, monitoring, training, management information and response options.

This British Standard also gives recommendations for the response service including:

a) minimizing their receipt of false alarms; and

b) ensuring that low level genuine incidents that do not require an immediate manned response are treated accordingly.

This British Standard provides a customer with recommendations and a benchmark when seeking a solution to reduce and/or eliminate the risk to staff operating away from the ability of colleagues to provide direct assistance. In such circumstances, an LWS solution provides a proportional response from the emergency services.

This British Standard is applicable to both suppliers and customers procuring LWSs.

NOTE See Figure 1 for an example of how an LWS fits into an LW policy.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 7858, *Security screening of individuals employed in a security environment – Code of practice*

BS 7984-2, *Keyholding and response services – Part 2: Lone worker response services – Code of practice*

BS 8591, *Remote centres receiving signals from alarm systems – Code of practice*

BS EN 50518 (all parts), *Monitoring and alarm receiving centre*

BS ISO/IEC 27001, *Information technology – Security techniques – Information security management systems – Requirements*

3 Terms, definitions and abbreviated terms

For the purposes of this British Standard, the following terms, definitions and abbreviations apply.

3.1 Terms and definitions

3.1.1 accurate location

area of space typically to within 10 m of the LWD/LWA, in the horizontal and vertical plane

NOTE For example, this might be a satellite location and/or a pre-activation message providing location information within a multi-storey building.

3.1.2 activation
operation of an LWD/LWA resulting in the generation of an activation message/call

3.1.3 alarm receiving centre (ARC)
continuously manned remote centre which receives activation messages/calls and engages in communications with LWs and response services

*NOTE See Clause **7** for further information on ARCs.*

3.1.4 customer
organization, employer and/or individual who contracts for the provision of LWSs

*NOTE A customer who subcontracts LWD/LWAs, monitoring and/or response separately to provide the LWS for its own LWs takes on the role of supplier as defined in **3.1.18**.*

3.1.5 dynamic risk assessment
continuous process of identifying hazards, assessing risk, taking action to eliminate or reduce risk

3.1.6 environmental risk
risks to the LW from hazards in their work environment which could have an adverse effect on their safety

NOTE This includes natural disasters, working with hazardous materials, working at heights, working with electricity, etc.

3.1.7 escalation instructions
documented instructions from the customer or individual which are available to the operator on receipt of an activation message/call and give details concerning use of response services

3.1.8 incident data
information containing the date/time of the incident occurring, the reason, associated accurate location, incident log, audio (or other evidential information) and any resolution to the incident

3.1.9 lone worker (LW)
individual who work by themselves, without close or direct supervision

NOTE 1 Examples of other terms used within the industry for LW include mobile worker or remote worker.

NOTE 2 Guidance on controlling the risks of solitary work is given in HSE guidance document, INDG 73 [3].

3.1.10 lone worker application (LWA)
dedicated application (software) running on a non-dedicated device(s) able to transmit an activation message/call and to provide communications

NOTE For example, a non-dedicated device can be a mobile device or satellite phone.

3.1.11 lone worker device (LWD)
dedicated electronic device, able to transmit an activation message/call and to provide communications

3.1.12 lone worker service (LWS)
combination of an LWD/LWA, monitoring, training and management information provided by a supplier to a customer, enabling a response to an LW’s activation message/call

3.1.13 operator

individual in an ARC who verifies and takes action on receipt of activation messages/calls

3.1.14 people risk

risk to the LW from unwanted actions of others

NOTE The following events can generate incidents which might fall into one or more of the following categories: verbal abuse, assault, medical emergency, incapacitation alarm (this is sometimes referred to as man-down or fall-down), alone and unsafe, user false alert, alcohol or drug related, and/or use of weapons.

3.1.15 points of contact

persons to be contacted both for gaining further information and communicating alarm details

NOTE For example, a manager, colleague or family member.

3.1.16 pre-activation message/call

information sent from an LWD/LWA to an ARC providing the operator with details about planned LW location, identity, nature of the task and any potential risk applicable at that point in time

NOTE 1 Collectively, these details might result from an LW's dynamic risk assessment.

NOTE 2 Examples of other terms used within the security industry for pre-activation message/call include memo, amber alert and pre-alert.

3.1.17 response service

response to an alarm call provided by the emergency services, a private security company or other customer arrangements

3.1.18 supplier

provider of an LWS to a customer

*NOTE A supplier provides an LWS either for a customer (see **3.1.4**) or its own LWs (see **3.1.9**).*

3.2 Alarm sequence terms and definitions

*COMMENTARY ON **3.2***

The following definitions apply to events from the incident to the response and are in sequence rather than alphabetical.

3.2.1 incident

situation or event leading to an alarm activation

3.2.2 alarm activation

operation of an LWD/LWA in response to an incident resulting in the generation of an activation message and/or call

3.2.3 activation message

information transmitted (including identity and accurate location) by an LWD/LWA to an ARC and which generates alarm information, location, personal details and escalation instructions to assist the operator in alarm verification

3.2.4 activation call

audio call from LWD/LWA to ARC which is used by the operator to assist alarm verification by identifying the nature of the incident

3.2.5 verification

process of determining whether an activation message/call is a false alert or a verified alarm

3.2.6 false alert

activation message/call that does not require an alarm call to be made and is subsequently cancelled by the operator

3.2.7 verified alarm

activation message/call that has been confirmed as a genuine request for assistance by an operator who has interpreted information transmitted from an LWD/LWA in conjunction with any pre-activation message/call, personal details and escalation instructions

3.2.8 alarm call

information communicated from an ARC to a relevant response service relating to a verified alarm and requesting a response

NOTE Attention is drawn to the NPCC [2] [2)].

3.2.9 false alarm

alarm call subsequently shown not to have been a genuine request for assistance

3.3 Abbreviations

ARC	alarm receiving centre
LW	lone worker
LWA	lone worker application
LWD	lone worker device
LWS	lone worker service
URN	unique reference number

4 Supplier recommendations

4.1 Structure

4.1.1 Management structure

The supplier should have a clearly defined management structure showing control and accountability at each level of the operation, which should:

a) define and document ownership and a place of registration of the supplier;

b) identify and document top management;

c) define and document that the supplier is registered as a legal entity or part of a legal entity, and, where appropriate, the relationship between the supplier and other parts of that same legal entity;

d) define and document any subordinate bodies, regional offices, joint venture partners and their places of incorporation and relationship to the overall management structure; and

e) define and document any operational bases, logistics or storage facilities used in support of the operations of the organization and the jurisdiction that applies.

[2)] Police Scotland Security Systems Policy is currently being reviewed.

4.1.2 Business operating manual

The supplier should have a clearly documented business operating manual which includes:

a) supporting procedures and work instructions;

b) a complaint management system;

c) a business continuity plan;

NOTE 1 Attention is drawn to:

1) for suppliers wanting to set up a business continuity management system, requirements are given in BS EN ISO 22301;

2) recommendations and guidance for information and communication continuity management are given in BS ISO/IEC 27031.

d) management information for the customer (see Clause **6**);

e) delivery of the LWS, including:

1) the risks associated with the delivery/operation of the products and services; and

2) effectiveness and customer feedback;

NOTE 2 Delivery activities can include actions under warranty provisions, contractual obligations such as maintenance services, and supplementary services such as recycling or final disposal.

f) policies; and

*NOTE 3 Example of policies include: data protection (see **4.4.1**), security (see **4.4.3**), human resources, lone working, health and safety, false alarm/alert management and quality management, management of subcontractors (see **4.5**), etc.*

NOTE 4 Attention is drawn to BS ISO 9001 for quality management systems.

g) management of any subcontractors.

4.1.3 Compliance

The supplier should record and denote which solutions deployed are compliant with BS 8484 and which are not. The supplier should inform customers of this information.

4.1.4 Integrity

Any unspent criminal convictions or undischarged bankruptcy of a principal should be disclosed on request.

NOTE 1 Attention is drawn to the Rehabilitation of Offenders Act 1974 [4].

NOTE 2 Attention is drawn to the Data Protection Act 1998 [5], Section 56, in relation to enforced subject access requests.

4.2 Financial stability of the supplier

*COMMENTARY ON **4.2***

*Where the supplier is solely providing a service for its own LWs (and not contracting out such services), **4.2** does not apply.*

The supplier should be able to demonstrate their financial processes, administrative procedures, or other history that might impact on operations, interested parties and stakeholders. The supplier should be able to demonstrate their financial stability by way of:

a) current financial accounts supplemented with management accounts;

b) banker's references or similar national equivalents as required; and

c) sufficient working capital for its requirements; the capital reserves of the supplier should be sufficient for current and planned needs.

The supplier should be able to present two years' audited trading accounts, except if they are starting as a subsidiary of an established business, and adequate financial backing should be evident. In the case of a new start-up business, management accounts should be made available to show that the supplier can demonstrate they have the funding available to achieve their plan for the business.

The supplier should prepare annual accounts in accordance with the Financial Reporting Council (FRC)[3] accounting standards.

NOTE Attention is drawn to the Accounting Standards Board.

Accounts should be available for examination on request.

4.3 Insurance

COMMENTARY ON ***4.3***

Where the supplier is solely providing a service for its own LWs (and not contracting out such services), then efficacy insurance and some other types of insurance mentioned in ***4.3*** *do not apply.*

The supplier should demonstrate that it has sufficient insurance to cover risks and associated liabilities arising from its operations and activities, consistent with contractual requirements. When outsourcing or subcontracting services, activities or functions, or operations, the supplier should ensure the subcontracted or outsourced entity has appropriate insurance cover for those activities.

The supplier should provide documentary evidence that they hold current insurance as appropriate and relevant to the contract in the proposed areas of operations.

NOTE Examples include fidelity guarantee, product liability, public liability, contractual efficacy, employer's liability and vehicle insurance.

4.4 Security

4.4.1 Policy

There should be a documented security policy which includes the following:

a) measures to ensure all data relating to customers and their employees and confidential company information is held and maintained securely (see **4.4.3**);

b) logical controls for the way in which data is held, (e.g. computer passwords, firewalls, data encryption, network intrusion detection systems or security software) and regular updates and reviews of these controls; and

c) where cloud and other relevant services provided by third party suppliers and vendors are used, they should conform to BS ISO/IEC 27001.

NOTE 1 Attention is drawn to the Data Protection Act 1998 [5] regarding security policy, data retention and data handling policy.

NOTE 2 BS 16000 provides guidance on security policy.

[3] https://www.frc.org.uk. Last accessed July 2016.

4.4.2 Data retention

Verified alarm data and voice communications at the time of an incident should be retained for a minimum period of 12 months, or as agreed with the customer, and recorded in the contract. Items for retention should include the following:

a) incident data;

b) personal details of LWs at the time of the incident; and

c) customer details at the time of the incident.

4.4.3 Data handling policy

The supplier should have a documented data handling policy which should be available to the customer upon request. This policy should include as a minimum:

a) details of data collection and handling;

b) access to data;

c) processing of data;

d) retention and deletion of data; and

e) security screening in accordance with BS 7858 or equivalent national standard.

The policy should apply to all directly employed personnel or subcontractor employed personnel who have access to LWs' personal data which uniquely identifies individuals.

4.5 End-to-end service

COMMENTARY ON ***4.5***

This British Standard accepts that an LWS is an end-to-end service, aggregated from several elements through the application of internal processes as established in the business operating manual (see ***4.1.2****). These elements may be developed internally or acquired from third parties. Key elements may include communications, subscriber identity module (SIM) cards, servers, LWD/LWA development, ARCs and web portals. All of these might affect the provision of the service by the supplier to the customer unless properly understood and controlled.*

The different elements and their source should be disclosed to the customer by the supplier in advance of the customer signing the contract and a copy of such disclosure should be retained by the supplier.

Any third party services should be controlled by contract and service level agreements (SLAs) where appropriate.

The supplier should disclose how the service is managed from end-to-end. The supplier should define and measure key elements and should make this data available for inspection. The disclosure should be commensurate with the overall service complexity and integrity.

Disclosure should demonstrate the supplier's duty of care to the customer by including an assessment of the risk from each element to the effective provision of the service. Such risks should be identified in writing and should include the supplier's method of mitigating each risk or assessing the impact when no mitigation is practicable.

The supplier should provide a mechanism by which service messages are communicated to customers and a log of events should be maintained for review.

Any service failures should be registered with the complaints management system.

5 Lone worker device (LWD) or lone worker application (LWA)

5.1 Essential functionality

All types of LWD/LWA supplied to customers should, as a minimum, possess the following functionality:

a) ability to transmit the current or last known accurate location, including the time and date of when the location was captured, as well as the LWD/LWA identity;

NOTE 1 See note in ***3.1.1****.*

b) audio facility to aid the operator when determining the nature of the LW's situation;

NOTE 2 Where an LWD/LWA with one-way voice communication is used, it is advisable that some form of two-way voice communication, such as a mobile phone, is supplied to the LW.

c) communication network signal strength and battery indicator;

d) battery life as stipulated in the contract between the supplier and the customer to meet the customer's anticipated usage;

NOTE 3 The customer's anticipated usage might include shift lengths, frequency of GPS acquisition and/or position transmission, geography, phone usage and other applications.

e) low battery warning both from the LWD/LWA and any associated apparatus to be available to both the LW and the ARC;

NOTE 4 Associated apparatus might be a Bluetooth [4] *or other wireless/wired trigger.*

f) capability to communicate a pre-activation message/call;

g) capability to communicate an activation message/call;

h) capability to initiate an audio connection to the ARC and the capability to retry an agreed (within the customer contract) number of times;

i) capability to be remotely accessed by the ARC operator to establish/request a location in the event of an incident or an authorized request from the customer. Any remote access messages/calls should be in accordance with an authenticated procedure, e.g. receiving messages/calls from a pre-registered number. Where this functionality is included, the LWD/LWA should include a security feature to prevent unauthorized requests;

NOTE 5 This capability can be exempt for an LWA if contractually agreed between supplier and customer following advice from the supplier.

j) capability for the ARC operator to initiate a message/call and listen

[4] Bluetooth is a trade mark owned by Bluetooth SIG. This information is given for the convenience of users of this standard and does not constitute an endorsement by BSI of the product named. Equivalent products may be used if they can be shown to lead to the same results.

discreetly in the event that a message/call from the LWD/LWA is prematurely terminated or there is an authorized request from the customer. Any remote access messages/calls should be in accordance with an authenticated procedure, e.g. receiving messages/calls from a pre-registered number. Where this functionality is included, the LWD/LWA should include a security feature to prevent unauthorized requests; and

NOTE 6 This capability can be exempt for an LWA if contractually agreed between supplier and customer following advice from the supplier.

NOTE 7 The functions in **5.1**i) *and* **5.1**j) *are intended for situations where an operator might need to confirm situation status, e.g. in the event of an LW being reported missing or premature termination of an audio message/call.*

k) means to minimize accidental activation.

NOTE 8 Examples of ways this can be achieved are:

1) two or more forces within a defined timeframe; and

2) single action over a defined timeframe.

5.2 Environmental risk

Where an LWD/LWA is to be used by an LW who has a risk profile that includes environmental risk, the following additional device features should be included for the situation and a solution should be agreed between the supplier and the customer:

a) ability to raise an activation message/call on the LWs behalf if the device senses the LW has become incapacitated;

NOTE Sensing of incapacitation can include:

1) orientation change; and/or

2) a defined period of non-movement and/or rapid acceleration/deceleration.

b) ability to carry out an audible/visual/vibration pre-alert to the LW for a defined period of time before an activation message/call sent to enable the LW to cancel the activation; and

c) capability to initiate an indication (e.g. vibration) to the LW to confirm that the activation message/call has been connected to the ARC.

5.3 People risk

Where an LWD/LWA is to be used by an LW who has a risk profile that includes people risk, the following additional device features should be included:

a) an LWD/LWA that is appropriate to the LW and the tasks they carry out, i.e. form function and usability;

b) an ability to discreetly raise an activation message/call; and

NOTE For example, no obvious audible or visual evidence to anyone other than the LW that an activation message/call has been raised.

c) a capability to initiate a discreet indication (e.g. vibration) to the LW to confirm that the activation message/call has been connected to the ARC.

5.4 Additional functionality

The following additional functionality of an LWD or LWA should be provided where appropriate.

a) Where two-way voice communication is included, it should have the capability for the LW to hear operator comments, enabling the operator to provide reassurance and updates on response progress and orally request information from the LW where appropriate.

b) Where a timer is included, for example, on occasions where restrictions on position or the communications network are expected, or times when the LW is unable to activate the LWD, unless the timer is cancelled, an activation message/call should be presented to the operator.

c) Where the customer has identified geographical risk and they are using geo-fenced areas, an automatic notification indicating entry or exit should be sent to a customer nominated point, e.g. to the LW, manager or the ARC.

d) Where the customer has identified a need to monitor battery capacity and mobile network signal strength, the device should be able to transmit this information to the ARC.

NOTE A device may have:

1) *an ability to transmit an automatic activation message/call based on a high-low or event threshold being surpassed and/or for a defined period of time, e.g. due to high or low ambient temperature, humidity or gases;*

2) *an ingress protection (IP) rating suitable to the working environment of the LW;*

3) *electrical approvals (e.g. ATEX rating) suitable if the working environment contains fire or explosive risks; and/or*

4) *additional features or configuration options to allow the device to be operated by visually or aurally impaired LWs.*

5.5 Communications network

The supplier should recommend the most suitable communications network(s) to meet the needs of the customer which should be based on best coverage/performance.

Where customers provide their own SIM card, they should be made aware in writing by the supplier that this might compromise the end-to-end service (see **4.5**).

The supplier should inform the customer that pay-as-you-go (PAYG) SIM cards should not be used due to the increased risk of failure.

NOTE LWD/LWA may have a fall-back means of communicating activation messages, e.g. if no general packet radio service (GPRS) network is available or fails to send, communication falls back to short message service (SMS).

5.6 LWA considerations

The supplier should inform the customer that if an LWA is employed, subsequent changes in phone operating systems and conflicts with other software should be assessed as they might cause the LWA not to operate as intended.

NOTE Customers might want to use an MDM (mobile device management) to prevent unauthorized changes.

5.7 LWD/LWA conformity

The supplier should have documentation available which demonstrates that an LWD or LWA meets the recommendations in **5.1**, **5.2**, **5.3** and **5.4**. This document should:

a) include detail of how it meets each recommendation of **5.1**, **5.2**, **5.3** and **5.4**;

b) where the document applies to an LWA, identify the make, model and operating system version of the phones used by the customer;

c) include the test programme and summary of test results, including any independent testing where applicable; and

d) be signed by an accountable person, usually the supplier's managing director (MD) or chief executive officer (CEO).

This documentation should be revised and updated if changes occur that affect conformity.

NOTE For the purposes of this British Standard the supplier assumes the responsibilities of the manufacturer of the LWD/LWA.

6 Training and support

6.1 Supplier training policy

6.1.1 General

The supplier should have a clearly defined and documented training policy. The policy should include training for the supplier's own staff including any temporary or subcontracted staff, the supplier's nominated customer LWS contact, customer LWD/LWA training and operator training.

6.1.2 Own staff including temporary or subcontracted staff

The training policy should include:

a) induction training in matters related to conditions of employment, policies and organizational procedures for all their personnel engaged in providing LWS;

b) training on all elements of the service they are providing to customers;

c) training should be updated and records of training retained when there is a change in methods, procedures or legislation;

d) all training provided should be recorded in a form specific for the purpose, be signed by each trainee, countersigned by the trainer and retained;

e) where a certificate of competence is provided by a recognized and relative sector competent training organization, the retention of a copy of the certificate; and

f) a programme of regular refresher training.

6.1.3 Supplier nominated customer LWS contact

The supplier should provide training for their nominated contact in the management of its LWS (see **6.2**).

6.1.4 Customer LWD/LWA training

The supplier should provide the customer with an LW user guide and training on the service which should include:

a) an understanding of how the LWS operates, why it is useful and any limitations;

b) how to operate the LWD/LWA to transmit pre-activation messages/calls and activation messages/calls;

c) discreet methods of conveying information to the operator when faced with an incident requiring caution and/or secrecy; and

d) how to minimize erroneous activations and pre-activation calls/messages resulting in false alerts and false alarms.

There should be provision for:

1) training new LWs;

2) refresher training for all LWs as agreed;

3) additional training for LW who generate false alerts; and

4) trainer courses where relevant.

NOTE Attention is drawn to The Health and Safety at Work etc Act [6].

6.1.5 Operator training

The supplier should ensure that operator training plans are included in the LWS.

The ARC manager should have in place an LW training programme for operators that include the following subjects as a minimum:

a) management of LW alarms such as that included in the NPCC [2];

b) when and when not to use the police unique reference number (URN);

c) verification;

d) dealing with false alerts;

e) managing a verified alarm;

f) action to be taken when an activation message is received without an audio call;

g) action to be taken when no accurate location is received; and

h) refresher training as required.

No operator should be authorized to manage a response to an activation message/call until:

1) initial training has been completed and verified;

2) they have completed supervised shifts; and

3) their manager has confirmed in writing that they are competent to work unsupervised.

All training should be recorded and documented.

6.2 Customer management

6.2.1 General

The supplier should make available support activities and management tools to assist the customer in the effective management of their LWs and to achieve a high level of adoption and usage across all LWs.

6.2.2 Support activities

Support activities should include:

a) telephone/email support and provision of a nominated customer service contact (e.g. account manager) if applicable;

b) any change requests (e.g. required changes to the LW or escalation details) to be accepted and implemented by the end of the next working day or as agreed with the customer;

c) initial report of a verified alarm within one hour of closure of alert;

d) submission of comprehensive incident report within 24 h of all verified alarms or as agreed with the customer;

e) where false alerts and/or alarms have been reported by the ARC (see **7.6.5**), these should be analysed and reported back to the customer; and

NOTE Further training for LWs might be required.

f) an ongoing programme of activity and LW engagement to encourage usage.

6.2.3 Management tools

Management tools should include:

a) monthly usage reports which may:

1) be customer definable for date, activity and grouping;

2) show usage levels by LW and customer definable group segregation;

3) show LWs who are not using the service or are using it incorrectly; and/or

4) show all activation messages/calls including false alerts, false alarms and verified alarms;

b) access to frequently asked questions and their answers;

c) access to training for new LWs and refresher training;

d) regular review of mobile network availability and any proposals for transfer of an LWS to a different network if necessary and agreed with the customer; and

e) alarm statistics (see **7.9**).

NOTE 1 The inclusion of a web based portal available 24/7 which includes the ability for customers to access is recommended.

NOTE 2 Table 1 gives further information on timings.

Table 1 **Target ARC response times from receipt of activation message/call**

Action	**Time** s	**Calls to fall within activation/verification response times** % of total calls [A)]
Activation message/call received at ARC and operator starts verification [B)]	10	80
	40	98.5
Complete verification [C)]	120	80
	180	90
	600	98.5

[A)] Performance statistics should be produced on a monthly basis. Achievement of these performance figures should be maintained over a rolling quarter.

[B)] Time B in Figure A.1.

[C)] Time C in Figure A.1.

NOTE 1 Verified alarms can be escalated to the emergency response services if the severity of an incident warrants this.

NOTE 2 Table 1 is intended to be read alongside Figure A.1.

7 Alarm receiving centre (ARC)

7.1 General

The supplier should supply the customer with an ARC conforming with Clause **7** and a relevant standard on ARC monitoring.

NOTE 1 Relevant standards on ARC monitoring are BS 8591, the BS EN 50518 series or BS 5979:2007 (see Foreword).

NOTE 2 Attention is drawn to the NPCC [2] policies for provision for level 1 police response to alarms.

7.2 Service

The ARC should:

a) provide a service in accordance with the agreed escalation instructions;

b) record activation messages/calls that have been cancelled or judged to be false alerts by an operator;

c) receive and process information to evaluate incidents accurately and in accordance with Table 1 (see **7.8**);

d) direct the relevant response service to the location of the LWD/LWA with the relevant personal information and situation about the LW requesting assistance; and

e) ensure the operator requests the appropriate response.

NOTE Attention is drawn to relevant police requirements for LWS as detailed in the NPCC [2].

7.3 Operational functions

The ARC should:

a) operate 24 h per day, every day of the year, with sufficient operators to respond in accordance with Table 1 (see **7.8**);

NOTE 1 To respond is to accept and start dealing with an activation message/call.

b) have a full business continuity plan to enable continued monitoring of activation messages/calls from alternative premises within 2 h, followed by reinstatement in accordance with the relevant ARC standard;

NOTE 2 It is desirable for the full business continuity plan to be up and running as soon as possible within the 2 h window.

c) establish the accurate location of the LW;

d) only use operators trained in accordance with **6.1.5** to handle activation message/calls.

NOTE 3 The use of trained operators is important because of:

1) the wide variety of possible incidents encountered (e.g. violence, abuse, accident, injury or illness);

2) the intensive training required to respond effectively to incidents potentially involving extreme harm to LWs; and

3) the effect on operators who might have to operate effectively while listening to a distressing incident.

7.4 Working environment

The ARC should maintain an environment in its operations area that is free from unnecessary distractions to:

a) limit the amount of ambient noise transmitted to an LWD/LWA; and

b) enable the operator to listen to, and therefore quickly verify, an incident, even through unclear received audio.

7.5 Oral communication

Any oral communication between an LW and an operator should be one-way initially (LW to operator) until the operator has established through the audio facility that it is safe to speak.

NOTE Immediate two-way audio is acceptable if the LWD/LWA has identified a probable incapacitation of an LW.

7.6 ARC operations

7.6.1 Operator training

The supplier should train operators in accordance with **6.1.5**.

7.6.2 Lone worker information

Relevant LW information should be pre-recorded and made available to an operator when an activation message/call is received at the ARC to help verify the incident.

Information should include:

a) escalation instructions (see **3.1.7**);

b) points of contact (see **3.1.15**); and

c) personal details which might include the following:

   1) employment information such as their job title;

   2) risk factors linked to their work and/or location;

   3) personal details such as their sex, age, ethnicity, physical description and photograph which might aid police in identifying the LW; and

   4) medical information such as details of medical conditions, allergies and treatment.

   NOTE Medical information can, if supplied, help the operator to analyse the situation (which might be a medical emergency) and can assist paramedics in making a correct diagnosis, carrying out effective treatment and avoiding inappropriate treatment.

7.6.3 Establishing the nature of an incident

The operator should establish the nature of the incident and the appropriate response required. Establishing the nature of an incident confirms whether it is a false alert, a verified alarm that requires no alarm call, or verified alarm that requires an alarm call. The following information should be available to the operator:

a) accurate location;

b) audio information, including oral information from the LW, if speech is possible;

c) pre-activation message/call where applicable;

d) duress code (if used);

e) personal details; and

f) points of contact, who might be needed to provide further information if the situation or location are unclear.

7.6.4 Verification

Once an operator has established a verified alarm and that an alarm call is required, the operator should escalate the incident to the appropriate response services in accordance with the escalation instructions.

7.6.5 False alerts

False alerts should be terminated by the operator. The operator should attempt to inform the LW at the time of termination and should then follow the agreed escalation process.

False alerts should be recorded by the operator. The ARC should inform the supplier about any false alerts [see **6.2.1**e)].

7.6.6 Procedures and documentation

7.6.6.1 Audit trails and records

A complete audit trail should be kept of all activities carried out in response to pre-activation message/calls and activation messages/calls.

All records and incident logs at the ARC should be maintained for a minimum of 12 months, except where the customer states alternative requirements in an agreed contract, and should include the following:

a) time and date of any pre-activation message/calls and activation messages/calls;

b) identity of operator(s) involved in the management of the incident;

c) operator actions in response to an activation;

d) time at which the operator closes down the incident; and

e) audio recordings associated with the incident.

7.6.6.2 Operating procedures

Documented operating procedures should be in place to support the consistent and continuous service provided by the ARC, including:

a) guidance to operators regarding:

   1) working within the ARC, including its functions and limitations;

   2) verifying activation messages/calls and determining false alerts;

   3) decision-making with relation to interpreting audio information from LWDs/LWAs and oral communications from LWs;

   4) appropriate use of URN, 999 or 101 in making an alarm call;

   5) managing an emergency incident;

   6) obtaining relevant information swiftly, accurately and discreetly;

   7) communicating with the response services;

   8) dealing with unverifiable activation messages/calls;

   9) dealing with total equipment failures at the ARC;

   10) capabilities and operation of the different LWD/LWA types registered with the ARC;

   11) active tracking of activations;

   12) creating reports;

   13) switching over procedures in case of partial equipment failure at the ARC; and

14) initiating business continuity plans [see **7.3**b)];

b) escalating problems to more senior staff.

NOTE Attention is drawn to the Data Protection Act 1998 [5] and the Telecommunications Act 2003 [7].

7.6.7 Escalation instructions

The escalation instructions should contain instructions regarding the response requirements and relevant information of every LW. Such instructions should immediately be available to operators when the ARC receives an activation message/call.

7.7 Access to information

7.7.1 Confidentiality and LWD/LWA user protection

Documented operating procedures in the ARC should be in place, as agreed with the supplier, to detect and prevent the use of LWDs/LWAs for unauthorized surveillance. Where there is a request for LW surveillance, there should be documented procedures in place to ensure that this is an authorized request.

7.7.2 Remote access

Remote access to LWD/LWA should be in accordance with **5.1**i) and **5.1**j).

7.8 Performance criteria

Unless otherwise agreed in writing with the customer, action should be taken to verify activation messages/calls and establish communications with an appropriate response service within the times stated in Table 1 from receipt of an activation message/call at the ARC.

Cases where verification cannot be completed for an activation message/call within the target time, allows for the occurrence of unforeseen circumstances, for example, insufficient audio to allow for verification or pre-alert time-out [see **5.2**b)] without confirmation that the LW is safe; in these circumstances, the operator should escalate the alarm as stated in the escalation instructions.

7.9 Management of activation messages/calls and alarm calls

The ARC should have sufficient resources to manage activation messages/calls and alarm calls until the relevant response service has dealt with the incident.

The ARC should monitor and review its capacity levels to ensure the appropriate level of trained staff are in place.

Management of activation messages/calls and alarm calls should include monitoring of audio and accurate location so that the response service can be informed of any changes to the LW's circumstances.

On closing an activation, the operator should be able to categorize by activation type and geography.

The ARC should make statistics available to the supplier for the purpose of reporting back to the customer [see **6.2.2**e)].

The ARC should make statistics available to the supplier for the purpose of reporting back to the customer [see **6.2.2**e)] as in Table 2 and Table 3.

Table 2 **Monthly lone worker alarm statistics**

Month	**Employees with BS 8484 devices/apps**	**Employees with non-BS 8484 devices/apps**	**Total activations**	**Number of verified alarms**	**Passed to police – URN**	**Passed to police – 999/101**	**Number of ARC filtered false alerts**
			(a)	(b)	(c)	(d)	(e)
–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–

NOTE Number in column (a) equals total of columns (b)+(c)+(d)+(e).

Table 3 **Monthly summary of verified alarms**

Date/time	**URN or 999/101**	**Incident type** [A)]	**Response by** (if police name the force)	**Result**
–	–	–	–	–
–	–	–	–	–

[A)] Incident type can include alcohol or drug related incidents, verbal abuse, use of weapons or physical abuse.

8 Response services

Response requirements should be stated in the escalation instructions between the customer and supplier (see **7.6.7**).

The supplier should ensure that the stated response requirements are consistent with the policies and capabilities of the response services, which could be:

a) emergency services (police, ambulance, etc.);

b) in-house response (supervisor, other LW);

c) contracted response:

   1) where the supplier is contracted to provide the response service, then this response service should conform to BS 7984-2 (guarding company, etc.);

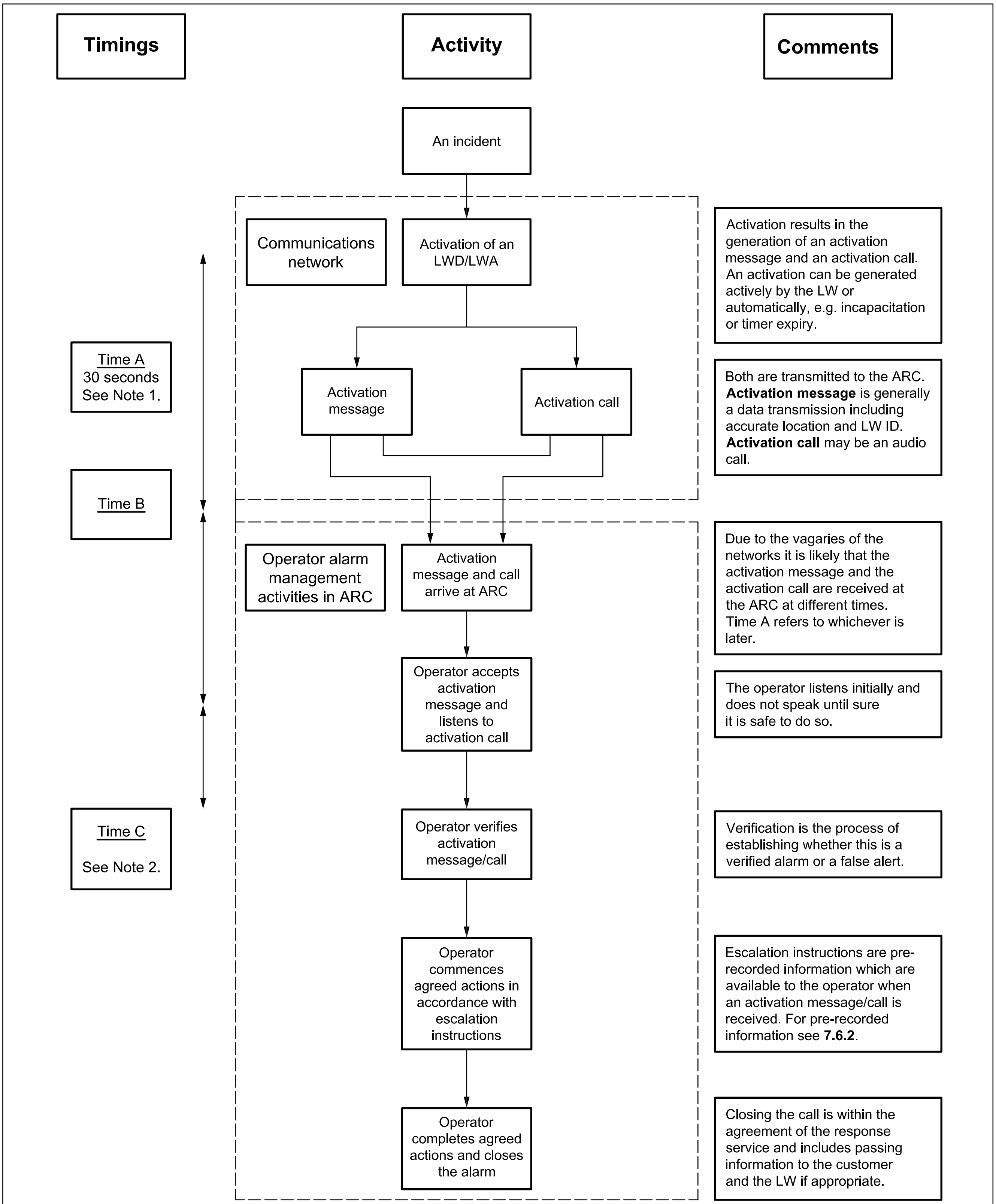
   2) where the customer directly contracts the response service, they should be advised to ensure that the response service conforms to BS 7984-2.

Security companies wishing to provide a response to LW alarms should conform to BS 7984-2 which includes specific training recommendations for mobile response staff.

Annex A (informative) Typical lone worker activation process

Figure A.1 shows a typical LW activation process.

Figure A.1 **Typical lone worker incident management process**


Timings
Activity
Comments
An incident
Communications network
Activation of an LWD/LWA
Activation results in the generation of an activation message and an activation call. An activation can be generated actively by the LW or automatically, e.g. incapacitation or timer expiry.
Time A
30 seconds
See Note 1.
Activation message
Activation call
Both are transmitted to the ARC. Activation message is generally a data transmission including accurate location and LW ID. Activation call may be an audio call.
Time B
Operator alarm management activities in ARC
Activation message and call arrive at ARC
Due to the vagaries of the networks it is likely that the activation message and the activation call are received at the ARC at different times. Time A refers to whichever is later.
Operator accepts activation message and listens to activation call
The operator listens initially and does not speak until sure it is safe to do so.
Time C
See Note 2.
Operator verifies activation message/call
Verification is the process of establishing whether this is a verified alarm or a false alert.
Operator commences agreed actions in accordance with escalation instructions
Escalation instructions are pre-recorded information which are available to the operator when an activation message/call is received. For pre-recorded information see 7.6.2.
Operator completes agreed actions and closes the alarm
Closing the call is within the agreement of the response service and includes passing information to the customer and the LW if appropriate.

NOTE 1 Time A recommendation is for guidance only and assumes there is a good mobile network strength.

NOTE 2 Time C allows for an activation where the situation is unclear and the operator might, for example, have to contact colleagues to help verify the activation.

NOTE 3 See Table 1 for further information.

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