

# Recovering and identifying the deceased and human remains

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## Operational structure

The scene evidence recovery manager (SERM) will assume control within the inner cordon from the fire and rescue scene commander. A specialist health and safety adviser should be consulted regarding scene safety, as appropriate to the type and scale of incident.

The SERM will establish a:

- scene access control point
- scene evidence recovery group

The SERM is responsible for:

- ensuring that the inner cordon is clearly delineated and secure
- agreeing access and documentation for the inner cordon
- deploying specialist personnel, to work in confined spaces or work safely at height, and equipment

The model below demonstrates the type of command structure that the SERM will operate under.

## Operational plan

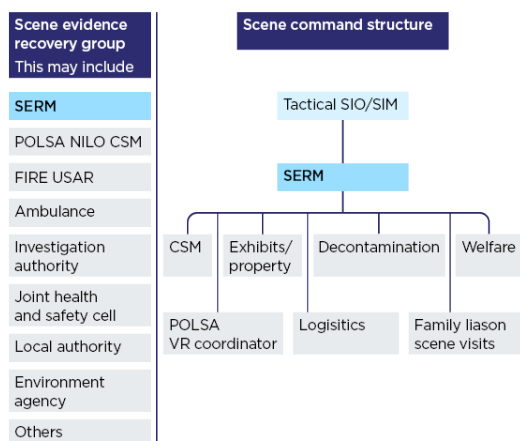
The SERM develops an operational plan for recovering the deceased, human remains, property and evidence. The senior identification manager (SIM) and senior investigating officer (SIO) should approve the plan.

It contains:

- a risk assessment of the scene

- health and safety procedures to be adopted (including personal protective equipment)
- details for establishing a victim holding audit area (VHAA) for the deceased persons and human remains
- a property and evidence audit area

## Suggested command structure for the retrieval and investigation phase



The SERM will manage all actions undertaken during the retrieval and investigation stage of the operation at the scene on behalf of the SIM and SIO. Initially, the SERM will establish a scene evidence recovery group. This group will be responsible for delivering the outcomes required to clear the site of the incident in line with strategies set in relation to the investigation and identification process.

## Scene evidence recovery group

The SERM will manage all actions undertaken during the retrieval and investigation stage of the operation at the scene until the scene is officially handed over to the local authority, normally at the recovery phase. The SERM will develop and implement a coordinated plan to retrieve deceased persons, human remains, property and evidence from the scene. These exhibits will then be examined by appropriate investigating agencies. In order to achieve these outcomes, the SERM may form and chair a scene evidence recovery group consisting of people with a role to play in recovering the deceased, human remains, property and evidence from the scene (see diagram of a scene evidence recovery group).

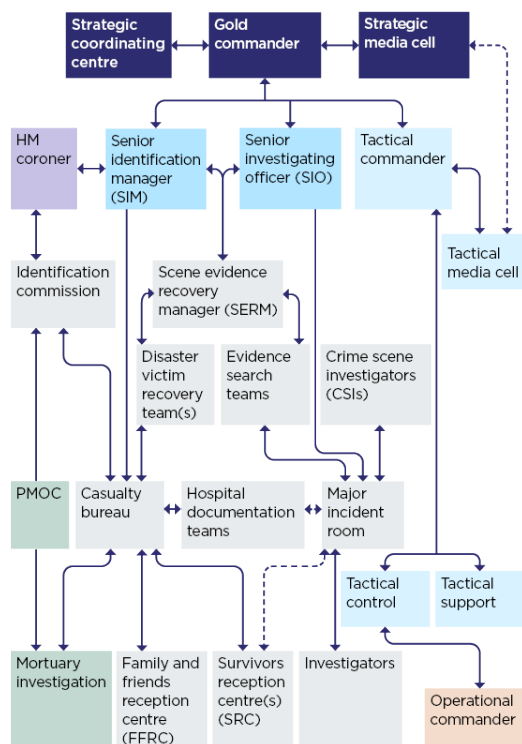
## Scene evidence recovery group members

This group may include:

- scene evidence recovery manager (SERM)
- victim recovery team leader

- property recovery team leader
- operational scene commander
- police search adviser
- police forensic adviser or crime scene manager
- health and safety coordinator
- Health and Safety Executive (HSE) adviser
- fire and rescue service scene commander
- a representative of other statutory investigative agencies, eg, the [air accident investigation branch](#) (AAIB), [marine accident investigation branch](#) (MAIB) and [rail accident investigation branch](#) (RAIB)
- logistics coordinator
- Environment Agency representative
- local authority representative, eg, an emergency planning officer, building control inspector or environmental health officer
- specialist contractors, landowner(s) or property owner(s) or their representative

## Diagram of a scene evidence recovery group



## Victim holding audit area

The VHAA is often a temporary structure where deceased persons and human remains retrieved from the scene of a major incident can be initially taken. They can then be transferred to a designated mortuary.

A VHAA is usually established and located just outside the inner cordon. Where there are multiple scenes, or the scene covers an extensive area, more than one VHAA may be established. In maritime incidents, a VHAA could be established at each of the seaports or airports where deceased people and human remains will be taken following retrieval from the scene.

A VHAA may need to be established prior to appointing a SIM or forming a mass fatality coordination group (MFCG). In these circumstances, the police tactical commander takes responsibility for establishing a VHAA. A police victim recovery team should be deployed immediately to the VHAA.

Responders should be advised of the VHAA and the circumstances under which deceased persons or human remains should be taken there.

## Restricting access

Restrict access to the VHAA. Keep a log of the name and role of every individual who enters and leaves, along with the reasons for access and the time. The number of personnel deployed to a VHAA is determined by the number of fatalities. A dedicated officer responsible for detailed and accurate recording and storage of exhibits may be necessary.

## Documentation

It is essential for the professionalism and integrity of the investigation that the correct documentation is completed carefully and accurately. This is also essential for identifying deceased persons and any human remains. Use the INTERPOL disaster victim recovery form to document the recovery of deceased persons and human remains. Use the [online INTERPOL disaster victim recovery form](#) if hard copy disaster victim recovery booklets are unavailable.

## Contents of a disaster victim recovery form

The disaster victim recovery form contains a unique reference number and a bar code and scene notes. The booklet also contains labels with the same bar code on them to ensure continuity.

Labels comprise:

- audit labels
- bag labels for deceased persons or human remains
- scene labels
- item labels for deceased person or human remains

Police victim recovery teams should be trained to use the forms prior to deployment. One form must be used for each deceased person or human remain.

Recovery teams may also use a number of other templates and forms at the scene in relation to:

- early intervention checks
- VHAA continuity

## Recognition of life extinct

It is essential that a recognition of life extinct (ROLE) check is carried out as soon as possible, to confirm all survivors have been found and removed for medical assessment and treatment. This should be done by suitably trained and qualified emergency service personnel. Following the recovery of all survivors, the emergency services should ensure that an auditable process is in place to confirm 'life extinct' in respect of the deceased.

No assumption must be made that everyone involved in an emergency or major incident is deceased, even in circumstances that would suggest there are no survivors.

Make a written audit account (ROLE) of the person(s) who undertook the check, the actions they took, who declared life extinct and when this was done. See [triage label](#).

## Subsequent death of injured victim

If an injured victim subsequently dies of their injuries, the coroner, in consultation with the SIO and SIM, should decide whether or not to transfer the body to the designated police mortuary for the incident. This allows for consistent management of the deceased and supports the process of identification and investigation. By channelling all fatalities through a single mortuary

with dedicated facilities, the police and health services will be able to better support the bereaved.

Where a casualty dies in hospital, the bereaved must be made aware of procedure and kept informed at each stage of the process, including:

- identification
- viewing the deceased
- releasing the deceased

## Victim recovery teams

Personnel used to recover deceased persons from a scene of an emergency or major incident should have completed a College of Policing-approved disaster victim identification (DVI) foundation course.

Victim recovery teams work under the SERM and have a designated team leader. They may also work in conjunction with other search and rescue teams, such as urban search and rescue capability (USAR). They will require additional training to an approved standard to work:

- in confined spaces performing confined area searches
- safely at height
- under chemical, biological, radiological or nuclear (CBRN) conditions

## Responsibilities

Victim recovery teams are responsible for:

- recovering all victims in accordance with the approved training standard
- working according to the recovery strategy set by the senior identification manager (SIM)
- completing all necessary disaster victim recovery documentation
- completing the initial visual check on deceased persons and human remains and recording all identification details revealed
- ensuring that all necessary photographs are taken at the scene
- sealing of body bags – the default position will be to seal the victim bags unless the SIO/SIM indicate differently which must be recorded as a policy decision by the SIO/SIM
- complying with all health and safety requirements

## Search

The SERM establishes the number of victim recovery teams required to conduct recovery actions. This will be informed by the timescales and parameters set by the SIM and gold commander.

The SERM may be advised by a:

- police search adviser on search matters or on recovery of deceased persons, human remains, property or evidence
- crime scene manager on forensic and evidential recovery procedures
- bomb scene examiner

The victim recovery teams may be deployed as stand-alone teams. They may also operate in conjunction with police search-trained personnel or other search personnel.

### Open area searches

The SERM can initially deploy search teams or victim recovery teams in a sweep-type search. This could be to cover larger areas with low numbers of deceased persons or human remains scattered across the area.

The scene may be divided into sectors and zones. Each zone should consist of channels of a suitable length and width for a victim recovery team to operate along. The size of the zone should take into account the terrain and the nature of the incident. Where the deceased persons or human remains are concentrated, the width of the search channel should be reduced. Each channel should have a start and stop position clearly identified. Both edges of the channel should be marked by orange tape.

When deceased persons or human remains (including suspected human remains) are located, the team leader should consider asking a doctor or another expert to examine the person or remains. A member of the victim recovery team may then conduct an initial visual check of the deceased. The team's documentation officer or team leader commences the audit trail on the disaster victim recovery form. They should use the approved label with the unique reference number and barcode. This is recorded alongside the deceased or human remains while they are still in situ.

Any personal property on or near the deceased or human remains is also recorded in situ to provide context of the find. Where an incident is confined to a limited area, the victim recovery team

may be deployed in two pairs or work as a team of four. When working in a pair, one member can undertake the search and recovery while the other acts as a monitor to ensure the health and safety of the officer conducting the retrieval. The team leader may rotate pairs or larger teams in difficult situations, or deploy them together as appropriate to the circumstances.

## Maritime incidents

Retrieving the deceased from the sea can be a challenging and complicated process and will involve the Maritime and Coastguard Agency. Very careful consideration needs to be given before police DVI teams are deployed in any maritime recovery.

In the event of a mass fatality incident occurring at sea, the police should send a liaison officer to the Maritime Rescue Coordination Centre, which is in command and control of the offshore element of the response to the incident. The liaison officer should identify locations where the deceased and human remains will be brought ashore. These may include ports, harbours, slipways and airports or helicopter landing sites. Wherever possible, the number of these landing locations should be kept to a minimum. Ideally, a single landing site should be used so that documentation can be completed in line with the DVI process. The documentation should be completed by the police victim recovery team at the designated VHAA. To ensure continuity, national documentation should be used to record details.

Police victim recovery teams should be sent to the designated landing location(s) to establish a VHAA. The victim recovery team should assume responsibility for deceased persons and human remains. The VHAA should be located close to a landing site where possible.

The vessels undertaking the recovery operations should be instructed to identify, wherever possible, the coordinates of where the deceased person or human remains were recovered. The vessel should land the deceased and human remains at the designated landing location(s).

## Road traffic collisions

Retrieving the deceased from the scene of a fatal road traffic collision can be a challenging and complicated process. Very careful consideration needs to be given to the deployment of police DVI teams at a fatal road traffic collision. See also [APP on Roads policing](#).

## Recovery actions

There are five aspects of recovery from a scene:

- recovering deceased persons
- recovering human remains
- recovering personal property
- recovering evidential property
- recovering technical property - items that may be required for any technical enquiry being conducted by:
  - the Health and Safety Executive ([HSE](#))
  - [Air Accident Investigation Branch](#) (AAIB)
  - [Rail Accident Investigation Branch](#) (RAIB)
  - [Marine Accident Investigation Branch](#) (MAIB)
  - any other organisation

Where more than one aspect applies to a recovered item, the SIM, SIO and lead investigator (or their representatives) must liaise with each other. They should agree how that item is to be treated, who will take responsibility for it and its retention and disposal.

## **Recovering deceased persons or human remains**

When deceased persons or human remains are located and the ROLE process has been completed, a member of the victim recovery team should conduct an initial visual check. This is to note any obvious evidence that may help to identify the deceased.

The situation of the deceased is recorded in situ. The team's documentation officer or team leader commences the audit trail on the disaster victim recovery form. They should use the approved label with the unique reference number and barcode. This information is recorded alongside the deceased or human remains while they are still in situ. Any personal property on or near the deceased or human remains is also recorded in situ to provide context about the find.

## **Retrieving personal property**

The SERM should agree a protocol with the SIM and SIO for roles and responsibilities of recovery teams.

The SIM should develop a policy for retrieving personal property, including the documentation and audit trail required. This policy should include whether a separate property exhibits officer is appointed to assume responsibility for items retrieved from the scene of a mass fatality incident. Only items found on or attached to deceased persons should accompany them to the mortuary. Other property, including property found lying on top of a person, should be treated as a separate item and recorded as such.

There may be personal property linked to deceased persons or human remains that offers evidence of potential identity. This could include identification documentation. These items should be photographed with the body, giving the position in which they were seen on the body. The item may be removed for checking. A detailed record of the information given, as well as the location of the item, should be made in the disaster victim recovery form scene notes section. These items should be recovered with the deceased, placed in a clear property bag and physically attached to the deceased in the same body. A photographic record of the process should be made.

This information will be used by the casualty bureau (CB) to apply the correct grading to a missing person record. Where possible identity is established, it is likely that a family liaison officer (FLO) will be allocated to the family of the deceased to begin antemortem procedures.

## Retrieving evidence

Retrieving evidence is usually the SIO's responsibility. The SIO and SIM should agree on a protocol for retrieving evidence. The protocol should include when evidence recovery will be carried out in relation to retrieving deceased persons, human remains and recovering personal property.

Separate documentation and audit trails are required for retrieving evidence, and the SIO or SIM should appoint dedicated exhibits officers.

## Technical property

This refers to any item that may be required for any technical enquiry being conducted by other investigative agencies such as the [HSE](#), [AAIB](#), [MAIB](#) or [Ministry of Defence](#).

# Antemortem procedures

In the context of DVI, antemortem refers to the processes that relate to identifying the victim prior to death. This includes collecting and analysing material or property. Antemortem procedures also

refer to processes associated with survivors and managing missing person reporting.

## Antemortem team

This team will be appointed by the SIM and be constituted according to the scale and specific requirements of the incident. It will:

- input information from the yellow antemortem forms onto the Plassdata computer systems (if being used) after being quality assured by the family liaison coordinator (FLC) or antemortem coordinator (AMC)
- prepare a list of missing persons believed to have been involved in the disaster
- obtain evidence of the likelihood that the missing persons were involved
- create a database of antemortem procedures evidence for comparison with that from the postmortem procedures documentation (for assessment by the identification commission)
- provide a single point of contact for the FLC and FLO and provide appropriate assistance to them

## Antemortem coordinator

The antemortem coordinator (AMC) works with the appointed FLC. They manage tasking FLOs and crime scene investigators to collect suitable comparative samples. These samples are used for analysis and comparison during antemortem procedures.

The AMC is responsible for compiling data in respect of each person reported missing and believed to have been involved in the incident. This includes people not yet accounted for or not yet identified as deceased. They are also responsible for the quality of the data. This data is compared with all available data collected from postmortem procedures to provide identification during the reconciliation process.

The AMC's responsibilities can be undertaken by the FLC or CB manager working directly to the SIM. In the event of a large-scale incident, consideration should be given to appointing a deputy SIM to oversee this area of work.

## Family liaison strategy

The gold commander ensures that a family liaison strategy is developed and implemented by the SIM.

The key objectives of a family liaison strategy are to:

- assist the effective investigation into the death of an individual in a mass fatality incident
- obtain a full family background, antemortem data, exhibits and other details as required by the SIM and the coroner or procurator fiscal
- provide the family with as full and up-to-date information as possible about the incident and its investigation
- define a suitable structure for delivering the family liaison strategy

For further information see:

- [Family liaison coordinator](#)
- [Family liaison officer](#)

## Antemortem sample collection

The FLO should supervise the collection of antemortem samples in conjunction with a crime scene investigator. The continuity of the sample from collection to laboratory examination needs to be carefully recorded and a method of sample labelling needs to be established by the SIM, FLC or AMC.

Any personal effects of a missing person must have evidence of provenance in the form of documented witness accounts and an audit trail.

## Antemortem dental comparison and odontology

Antemortem dental comparison samples may be collected from dental practices and orthodontic practices. Samples can also be collected directly from the family or home of the missing person believed to be the deceased.

Dental records do not follow the patient. The FLO should ask the family for the names of the missing person's current and previous dentists. This will ensure that all relevant dental information is collected.

## Requesting samples

When requesting samples from professional medical and dental sources, it is important to ask for the original:

- dental charts and all dental records
- X-rays
- models (casts)
- specialist records and relevant correspondence
- medical and dental clinical photographs

Antemortem evidence that may be collected from the family or home may include:

- recent photographs of the person smiling and showing their teeth
- recent photographs of the person from the side and the front

## Antemortem DNA sample collection

DNA comparison is most efficient when a DNA profile from deceased persons or human remains can be matched against a comparative sample held on the national DNA database.

Four types of DNA can be obtained as part of the antemortem data collection strategy.

### 1. Reference DNA

A profile that is stored on the national DNA database. A national DNA database record will only be available if the deceased had previously come to police attention.

### 2. Surrogate DNA

A profile obtained from objects and materials that are likely to yield the DNA profile of the deceased. These are usually personal objects used exclusively by the deceased. Examples include:

- comb
- hairbrush
- toothbrush
- headwear
- razors
- gum-shields

- footwear
- gloves
- medical inhalers

### 3. Familial DNA

A profile obtained from known, close blood relatives of the deceased. These are the deceased's:

- natural mother
- known natural father
- confirmed children

### 4. Elimination DNA

A profile obtained to confirm or eliminate a surrogate or familial DNA profile. For example, a sample from a sibling of the same sex may be provided. The DNA profiles can then be compared to demonstrate that they are indeed siblings. For a UK-based incident, the national DNA database crime stain kits (eight-series bar codes) should be used. This ensures that each individual sample is labelled with a unique bar code. The reference sample kits should be submitted to the laboratory as soon as possible. If there is to be any delay in submission, the kits and DNA samples should be frozen.

## Antemortem fingerprint sample collection

A crime scene investigator should collect latent fingerprint marks, which should be compared on an automated fingerprint identification system, such as IDENT1.

There may be other means of obtaining a set of latent fingerprint marks which the FLO should explore, including:

- fingerprints taken by the police and held by the Criminal Records Office
- fingerprint records in biometric passports or on digital devices
- workplace biometric data, which may include fingerprint records held by the human resources or personnel department

Where possible, fingerprint experts should have relevant fingerprint data collected during postmortem procedures when attending the antemortem data collection site. This may speed up and simplify the identification process and significantly reduce the stress of such procedures for the

family.

## Postmortem procedures

### Identification criteria

The criteria used to identify the deceased are set by the coroner or procurator fiscal in consultation with the SIM. The lead pathologist is also consulted.

The agreed criteria determine which primary identifiers should be used, which, in turn, define the antemortem data collection strategy. Secondary and supporting identifiers are usually used to support primary identifiers.

Normally, one primary identifier is sufficient for identification. However, following the best evidence rule, this can be accompanied by secondary and supporting information to ensure accurate identification. Visual identification is not in itself a reliable, accurate form of identification.

### Primary identifiers

These include:

- odontology (forensic dental examination)
- ridgeology (includes fingerprints, palm prints and planter/foot print)
- DNA

For further information, see identification evidence.

### Secondary identifiers

These include:

- unique medical identifier – serial number of an implant
- marks
- scars
- tattoos
- medical records
- medical images, such as x-ray, CT scan
- unique identifiable jewellery

- personal effects
- distinctive or unique clothing
- physical disease, amputations etc

## Assistance only

These include:

- jewellery
- clothing
- location
- description
- visual appearance of the deceased

## Mortuary management team

Local authorities are responsible for providing mortuary facilities and arranging a licence for emergency mortuaries with the [Human Tissue Authority](#) (HTA). The SIM should also appoint a mortuary facilities manager, who sits on the mortuary management team and works alongside the police mortuary operations coordinator (PMOC).

## Members

Members of the mortuary management team may include:

- police mortuary operations coordinator (PMOC)
- mortuary facilities manager/emergency mortuary coordinator (normally local authorities or Health Service)
- lead pathologist
- **designated individual** under the [Human Tissue Act 2004](#)
- coroner's officer or officer from the procurator fiscal's office
- mortuary exhibits officer
- antemortem coordinator (AMC)
- health, safety and welfare coordinator
- resources manager
- senior radiographer or radiation protection supervisor
- specialist advisers as required

## Responsibilities

The responsibilities of the mortuary management team include:

- supervising mortuary procedures
- coordinating supplies, equipment, services and staff
- briefing family members via the family liaison coordinator (FLC)
- liaising with the police media liaison officer at the gold tier of command, government departments and press offices

The mortuary management team must record all decisions made in preparation for a mass facility incident, during the response and during post-incident reviews.

## Mortuary facilities manager

If an existing public or NHS facility is used as an emergency mortuary, local authorities or an NHS trust should have appointed a manager to run the facility. This person usually undertakes the role of mortuary facilities manager, if that mortuary is used for DVI or for a mass fatality incident.

## Responsibilities

The specific responsibilities of the mortuary facilities manager include:

- liaising with the [HTA](#) to arrange for any necessary licensing of the venue
- arranging logistical support to all areas of the mortuary facility
- working with the police mortuary operations coordinator (PMOC) to oversee all relevant staffing requirements, including welfare issues
- arranging for a qualified first aider to be on site and available at all times of operation
- working with the supervising forensic pathologist to ensure there is appropriate consideration and enforcement of all relevant health and safety legislation and hygiene practices
- managing the provision, use and stockpiling of personal protective equipment, stationery, office supplies and mortuary staff refreshments (mortuary facilities)
- arranging for the proper handling, storage and disposal of clinical waste
- supervising cleaning all parts of the mortuary facility
- organising and supervising commissioning and decommissioning the mortuary facility (including ensuring that all necessary cleansing and repairs are undertaken in advance)

## Mortuary documentation officer

In a large-scale incident, the PMOC may require additional assistance and may appoint a mortuary documentation officer. This post is held by a DVI-trained police officer who is responsible to the PMOC.

### Responsibilities

The responsibilities of a mortuary documentation officer include:

- quality assuring the documentation in the mortuary in relation to the postmortem examination of victims
- collating postmortem data documentation
- liaising with the pathologist, odontologist and other specialists to agree and establish the appropriate documentation, ensuring consistency within the submission process for reconciliation
- liaising with the major incident room regarding all evidential documentation and other disclosable data created within the mortuary
- liaising with the reconciliation team (if created) to provide postmortem information

## Mortuary exhibits officer

This is usually a police officer who is responsible to the PMOC.

### Responsibilities

The responsibilities of a mortuary exhibits officer include:

- recording details of all property received from the postmortem team
- listing the property against the relevant deceased person or human remains
- ensuring the correct packaging and labelling and continuity of all exhibits generated during the post-mortem process
- recording details of all movement and storage of exhibits
- providing secure storage of property taken from the deceased
- liaising with the major incident room as necessary
- arranging all forensic submissions in line with the policy decisions of the coroner or procurator fiscal, the senior investigating officer (SIO) and senior identification manager (SIM)

- consulting with the family liaison coordinator (FLC) about which items of property the relatives wish to be returned in due course
- liaising with the FLC, the SIO and funeral directors about restoring property to family and friends
- disposal or release of property in accordance with instructions from the coroner or procurator fiscal, the SIO and/or SIM

## Mortuary arrangements

Local resilience forum (LRF) plans for mass fatalities should include details of mortuary arrangements. The requirement for mortuaries depends on the number of deceased, their condition and the required level of postmortem investigation. There are three options for mortuary arrangements:

- existing mortuaries
- existing mortuaries with additional storage facilities arranged
- local emergency mortuary arrangements (including regional arrangements, where they exist)

The deceased should be taken to a mortuary in line with the identification policy, and reception and documentation arrangements should be agreed between the coroner or procurator fiscal and the SIM. The general principle is that one mortuary should be used. Decisions about mortuary arrangements are usually made by the MFCG.

## Local emergency mortuary arrangements

Each LRF and local authority should have a plan for activating an emergency mortuary. This should include locations identified as suitable (as agreed by the coroner or procurator fiscal) that comply with [\*\*Home Office \(2004\) Guidance on dealing with fatalities in emergencies, Annex B Mortuary Requirements\*\*](#).

Where an LRF has been unable to identify suitable existing local mortuary facilities, they may have a formalised arrangement with a private sector company to use emergency mortuary facilities.

## Reception arrangements

Deceased persons and human remains are transported from the scene (usually from the VHAA) under arrangements agreed by the coroner or procurator fiscal, the SIO and the SIM.

Transportation is subject to local arrangements and may be undertaken by:

- police
- funeral directors
- private ambulances

Mortuaries usually have a designated reception area to which all arriving deceased people and human remains are taken. On arrival, police personnel should check that the correct documentation has accompanied the deceased or human remains. They should also check that the audit trail is intact and should record the details. The deceased or human remains are then accepted into the mortuary and conveyed to the relevant storage area.

The personnel working in the reception area should be briefed on the nature of the scene. Appropriate personal protective equipment should be provided to enable them to undertake their work safely.

## Documentation in the mortuary

Mortuary documentation needs to be stringent. All deceased persons, human remains and related samples undergoing laboratory examination need to be carefully recorded. An appropriate method of sample labelling needs to be established by the forensic coordinator and the PMOC.

The recovery of the deceased and human remains should have been documented on the INTERPOL disaster victim recovery booklet as previously outlined. The pink postmortem forms should be used throughout the postmortem procedures in conjunction with the forms below:

- mortuary process register
- early information forms
- mortuary movement logs
- exhibit books

## Identification evidence

### Forensic odontology

Odontology is a branch of forensic medicine involved with dentistry. The teeth are the hardest tissue in the human body and are the most resistant to trauma, decomposition, water immersion and fire. Odontology may be the primary method of identification in cases where there are more extreme levels of damage or decomposition of a deceased body.

When loose or individual teeth are found at the scene of a major disaster, they should never be destroyed, as they are likely to still hold DNA and offer valuable clues to identity later on. If dental items such as false teeth, crowns, bridges, dentures and fillings are found, they should also be retrieved and documented, as they may be unique to the owner and may lead to identification of that individual.

## Ridgeology

Friction ridge skin from the hands and feet can be used for identification purposes.

Prints are taken from deceased persons or human remains. They can be compared with those that have either been taken at an earlier time or have been gathered as part of antemortem procedures. An individual's fingerprints may have been taken previously and added to IDENT1, or the United Kingdom Border Force databases.

A team of fingerprint specialists and crime scene investigators should physically take the prints. A recognised fingerprint expert should quality assure the recovery process.

Prints may be used in the reconciliation process as part of identification.

## DNA

DNA profiling may be used as a primary tool to reunify remains and identify victims of mass fatality incidents. DNA profiling techniques may be particularly useful if the victims' bodies are disrupted or decomposing. DNA may still be successfully obtained from teeth or bone samples in those cases.

DNA profiling is a comparative technique. In order for the identification commission to make a positive identification, two different samples are required. The first is a postmortem DNA sample taken from the victim. The second is a DNA sample collected during antemortem procedures from the person believed to be the potential victim.

In managing the DNA identification process, the SIM may need to establish a DNA reconciliation team. This team has three functions:

- DNA postmortem team for sample profiling
- DNA antemortem team for sample profiling
- DNA data reconciliation team for data matching

DNA samples may be used within the reconciliation process as part of identification.

## Forensic anthropology

The human skeleton is a hard tissue that is resistant to decomposition and survives disruption. Forensic osteology is a sub-discipline of anthropology and can be of assistance when bones are being examined. The identification process involves selecting and cleaning bones for examination. This can be done in a mortuary.

### Benefits of an osteological examination

An osteological examination may provide information on:

- age
- sex
- racial characteristics
- physical stature
- congenital and developmental disease
- medical conditions
- healed fractures
- anomalies or abnormalities, including surgical hardware and prosthetic devices
- perimortem trauma (trauma caused during death)
- the anatomical location of body parts
- distinction between human and non-human material

## CT scanning

The coroner or pathologist may wish to perform CT scanning to assist in identifying a body or material. CT scanning can be used for the whole body and the teeth to find clues to the cause or manner of death. A CT scan can diagnose a specific injury, disease or abnormality. It may also help to screen deceased persons or human remains for foreign material such as:

- pacemakers
- implants
- metallic items
- explosives devices
- firearm projectiles

CT scanning is of particular use in response to a CBRN mass fatality incident, as it enables the pathology team to view the contents of a body bag in detail before exposing themselves to the risk of opening the bag.

## Removing human remains and taking samples

All requests for invasive forensic procedures regarding deceased persons or human remains (including removing samples, organs or limbs) must be made to the coroner or procurator fiscal. These processes should only be done in accordance with the [Human Tissue Act 2004](#).

Samples taken during a postmortem examination or under a special examination may have separate or dual status under coronial jurisdiction and as evidence under the [Police and Criminal Evidence Act 1984](#). The SIO and SIM should agree on the nature of samples required for investigation and identification purposes. The decisions that come under dual jurisdiction should be recorded in the respective policy books. Once agreed, they should consult the coroner or procurator fiscal to authorise the samples to be taken. The lead pathologist may then arrange for these samples to be taken in conjunction with the PMOC.

The deceased's next of kin should be kept informed in respect of any samples taken during the postmortem process. They should be informed why the samples were taken, as well as the retention arrangements. The coroner or procurator fiscal and the SIM should discuss and agree the most appropriate way for the family to be informed. This will be either by the FLO or coroner's officer.

## Aftercare of the deceased

After the identification examination process, deceased persons and human remains are stored in a new body bag with the same label details. Using colour-coded bags at this stage may assist the system for storing the deceased.

## Viewing the deceased

The MFCG should consider the options for the family and/or bereaved to view the deceased. If considered appropriate, this should take place at either:

- a designated family viewing area at a location separate from a main emergency mortuary

- a funeral director's premises after the deceased person or human remains have been released by the coroner or procurator fiscal

The mortuary management team should consider the privacy, confidentiality and dignity of the deceased and their family.

If the bereaved wish to view then this process should be facilitated and will normally take place once formal identification has been confirmed. Each case will be unique and it should be carefully explained to the bereaved that it may be necessary for investigators to put special arrangements in place.

## Viewing arrangements

Where viewing arrangements are available, the coroner's office will give the next of kin information on arrangements for viewing the body as soon as possible, if they wish to do so. In all cases, the coroner's office will advise the next of kin or their representative of the procedure for viewing the body, the family and/or bereaved should be briefed by an FLC or FLO on mortuary and viewing procedures.

The PMOC will maintain a log of all visitors and will ensure that suitable arrangements are in place for any visitors to the facility, including crime scene log protocols. All visits should comply with health and safety and risk management advice and guidance.

## Releasing the deceased

The coroner or procurator fiscal will authorise the release of the deceased to their family and complete the appropriate documentation. Assumptions should not be made about the identification of a family. Difficulty may arise where the deceased has been estranged from the whole or part of their family prior to their death, or may have relationships with people who are unknown to other members of the family.

Where a situation exists that the deceased person's family cannot be reconciled in order to be assisted by one FLO, the SIM may decide to treat elements of one family separately and appoint more than one FLO to separate elements of the same family.

During the identification process, the FLO and/or coroner's officer should make the bereaved aware of the condition of the deceased. They should then ascertain the family's wishes regarding the

release of the deceased person or human remains. The FLO or coroner's officer should also discuss with the bereaved what is likely to happen if further human remains are recovered and identified during the investigation. The bereaved should be asked about their wishes for those human remains and whether or not they may consent to any communal arrangements. The family's wishes should be relayed to the coroner or procurator fiscal.

## Fragmented and commingled human remains

Where fragmented and commingled human remains cause additional challenges, families should be consulted as to their preferred release and repatriation options. Some families may choose to wait for the end of an operation before any repatriation or funeral. Other families may have different wishes, such as whether or not they are informed regarding any further identification of additional remains.

## Unclaimed deceased

The coroner or procurator fiscal decides on the procedures in cases of deceased persons who remain unclaimed.

If a deceased person is unclaimed, local authorities arrange for burial or cremation in accordance with their statutory obligation imposed by the [Public Health \(Control of Disease\) Act 1984](#). Such a disposal should be in accordance with any identified faith requirements. In circumstances where the next of kin is identified, but does not wish to claim the deceased, they must still be advised of the time, date and location of a burial or cremation.

## Evidence

Fragments of evidence may be recovered at the mortuary or discovered during radiography or during a postmortem examination. In terrorist incidents, trained exhibits officers from the counter terrorism unit are attached to the mortuary in order to provide specialist skills for processes such as the forensic examination, retrieval, recording and storage of samples and property. The Metropolitan Police Counter Terrorism Command (SO15) is responsible for the safekeeping of all exhibits recovered following a terrorist incident.

## Property

Caution should be used before cleaning property without first consulting family members through the FLC and FLO. Certain faiths require that all parts of a deceased person are buried or cremated. This may include bloodstained clothing. In addition to ascertaining the wishes of families, the SIM or SIO should seek advice on the health and safety implications of returning unclean items to relatives. A photograph of each item should be retained before the item is returned to family members.

Following a mass fatality incident, it is likely that a great deal of property will need to be collected and managed. In these circumstances, the SIM may appoint a property manager.

## Property manager

The property manager implements the predetermined strategies on identifying, investigating, obtaining or seizing, retaining and returning personal property and evidence. They must also complete the appropriate documentation.

Their responsibilities include:

- ensuring that all property is stored securely
- liaising with the SERM
- liaising with the PMOC
- liaising with the reconciliation manager
- ensuring that all mortuary exhibits officer duties are complied with
- managing the health, safety and welfare of all exhibits personnel, ensuring that appropriate risk assessments are performed and documented
- documenting all decisions and the rationale for them

## Reconciliation procedures

Reconciliation is the process by which data collected during antemortem procedures is analysed against the data collected during postmortem procedures, in order to identify the deceased and reunite human remains from the same human body.

The SIM should create an identification strategy.

This should include the:

- manner in which the process will be undertaken
- appointment of a reconciliation coordinator
- membership of the reconciliation investigation unit
- use of information systems technology (for example, Plassdata)
- use of unique features to make provisional identifications
- format of the reports to be sent from the reconciliation investigation unit to the identification commission

The reconciliation coordinator should be in frequent contact with the AMC and the CB manager to ensure that information is passed between the two teams. The PMOC also provides the reconciliation investigation unit with relevant information regarding the examinations of the deceased.

The reconciliation coordinator should ensure that procedures are in place to make provisional identifications as soon as possible. The SIM should have a strategy on:

- the information that will be provided to families and friends at which stage of the identification process
- the issue of early provisional identification criteria (possible, probable and established identification)

## Reconciliation coordinator

The reconciliation coordinator is an investigator with knowledge of the DVI process and forensic techniques. They may have a team of people, including specialists, who are independent of the data collection processes.

The role of the reconciliation coordinator is to:

- liaise with the SIM to implement the identification strategy and reconciliation process
- coordinate activities within the reconciliation investigation unit
- ensure that all reconciliation unit staff are equipped, trained and qualified
- ensure that there is continuity within the identification process
- assume responsibility for all aspects of documentation in relation to the identification process
- ensure the quality control of submissions, including the return of any samples to the victim

- collate and manage data captured from antemortem and postmortem procedures in respect of each victim
- work using Plassdata, where applicable
- ensure compliance with the [Human Tissue Act 2004](#)
- liaise with the FLC, CB manager and forensic providers
- manage the health, safety and welfare of all personnel in the reconciliation unit, ensuring that the appropriate risk assessments are documented
- document all personal decisions and the rationale for them
- coordinate logistical support and security for the reconciliation unit
- compose reconciliation files for the coroner or procurator fiscal
- act as presenting officer at the identification commission, as appropriate

## Reconciliation investigation unit

The reconciliation investigation unit collates and matches data collected during postmortem procedures with data collected during antemortem procedures. It processes textual and scientific data to support identification.

The core functions of the unit include:

- processing postmortem and antemortem data and physical exhibits
- establishing victim identifications by forensic specialists in ridgeology, DNA and forensic odontology
- validating potential forensic identifications
- preparing reconciliation files for established identifications, prior to presentation at the identification commission

## Reconciliation files

The reconciliation manager is responsible for preparing reconciliation files on behalf of the SIM for presentation at the identification commission.

The report should contain a summary capturing:

- family name of the deceased
- forenames of the deceased

- name by which known to family and friends
- date of birth
- place of birth
- nationality
- missing person nominal number(s)
- disaster victim number(s)

The report usually comprises five sections, which should include the following information.

## 1. Introduction

This includes:

- the purpose of the report
- a brief background into the circumstances by which the deceased became involved in the mass fatality incident
- the place the deceased was last seen
- information about their personal circumstances
- brief information about who reported the deceased missing may be included

## 2. Primary identification evidence

This includes:

- a summary of the type of evidence used to make the provisional identification and how the match was achieved
- the name of the person making the provisional identification and their role in the DVI process

## 3. Secondary identification evidence

This includes:

- a summary the type of evidence used to make the secondary identification and how the match was achieved
- the name of the person making the secondary identification and their role in the disaster victim identification (DVI) process

## 4. Supporting evidence

This includes:

- additional relevant information to assist the coroner or procurator fiscal

## 5. Conclusion

This includes:

- the level of identification achieved
- the view of the reconciliation manager on the effectiveness of that identification

Each report must be signed by the reconciliation coordinator and countersigned by the SIM.

## Burial or cremation orders

Burial or cremation orders are obtained from the coroner when the inquest is opened.

In Scotland, the requirements for certification for a cremation are more extensive than those for a burial. The [Burial and Cremation \(Scotland\) Act 2016](#), however, allows for the suspension or modification of other parts of the Regulations during an epidemic or for other sufficient reason. The Regulations are suspended by an order of the Scottish ministers and the order becomes a statutory instrument. Such changes are required only in exceptional circumstances and the practical arrangements to implement these modifications should be tailored to the particular situation.

## Plassdata – DVI System International

This computer application is authorised for use by UK police forces to assist in analysing data collected during antemortem and postmortem procedures. Information obtained during the antemortem process should be entered from the yellow antemortem forms and information from the postmortem process from the pink postmortem forms.

Provisional matches are brought to the immediate attention of the reconciliation coordinator, who then determines the appropriate action to take in response to that match.

## Identification board or commission

**Identification board** – this is a formal panel that hears evidence and approves official identification of the deceased. It is usually chaired by a coroner or procurator fiscal, but can be chaired by a

prosecutor in some other countries.

**Identification commission** – this performs the same function for larger incidents, often where citizens of a number of countries are involved. Countries that have lost citizens may be allowed to participate in or observe the identification commission.

For operations involving a low or manageable number of fatalities, successful identification may take place in the mortuary.

Whatever the scale of the operation, a reconciliation file detailing how identification has been achieved needs to be completed and presented to the coroner or procurator fiscal.

## Example

A forensic odontologist may be able to compare antemortem dental records to human remains in the mortuary. Other secondary identifiers and supporting information must also be noted. In such cases, the PMOC may be responsible for the reconciliation process on behalf of the SIM.

For larger operations, a larger reconciliation investigation unit will be formed to investigate and compare antemortem missing person data and postmortem data. This will be required to achieve reliable scientific identification. The unit will be led by a reconciliation coordinator who has completed the national SIM course.

The reconciliation coordinator will compile appropriate and sufficient evidence of identification. They will then present the evidence to the identification board or commission.

Typically, police representation at this group will include the SIM, reconciliation coordinator, reconciliation investigators and/or PMOC. There will also be forensic specialists providing primary identification evidence such as:

- forensic odontologist
- ridgeology (fingerprint) expert
- DNA expert

Others present may include:

- pathologist

- forensic anthropologist
- FLC
- where considered appropriate by the chair, observers or other interested parties according to the specific incident

The details of the victim and some relevant circumstances of how they became involved in an incident will be presented by the reconciliation investigation unit. Details of other relatives who are believed to have died during the same incident are also relevant. Familial DNA searching and comparison may be used as an identification tool. The relevant expert or experts then provide a summary of the primary identification evidence, using imagery where appropriate.

## Secondary and supporting evidence

The reconciliation investigation unit will then provide details of other secondary and supporting evidence to support the identification. This is to ensure that there has been no error in attributing primary identification evidence to the wrong case file. If the chair and panel agree that the evidence of identification meets the required standard, which is set by the coroner, then the family of the disaster victim can be informed. Arrangements for release and repatriation can then commence.

In some exceptional circumstances, where primary identification is not achievable, the chair may consider cases where a combination of strong secondary and supporting identification is presented.

Prematurely informing families that a case is to be presented for identification can cause problems and is not recommended. This is particularly the case where the panel defers the case and decides that further investigation is required.

## Repatriation

Once a deceased person has been formally identified, the coroner or procurator fiscal orders the formal release and repatriation of the deceased person or human remains to the agreed next of kin.

The FLO determines the wishes of the family and/or bereaved regarding repatriation of the deceased person and their personal property. This information is then given to the coroner or procurator fiscal and the SIM. If the deceased is a foreign national, the deceased person's embassy or consul may advise the repatriation officer of the wishes of the next of kin.

There are strict international rules in respect of the carriage of a deceased person or human remains abroad. An undertaker with the necessary experience should be consulted. If appropriate, the undertaker should complete the necessary forms and procedures on behalf of the repatriation officer and the next of kin.

## ‘Out of England’ authority guidance

Regardless of how or when a death occurred, the next of kin may wish to remove a deceased person or human remains from England and Wales for burial or cremation elsewhere. In these circumstances, the coroner should be asked to grant an **‘Out of England’ authority**. The coroner will consider any request and make a judicial decision on whether the deceased person or human remains can be released, or whether they need to be retained. The ‘Out of England’ authority should contain the unique reference number(s) allocated to that deceased person or human remains during the victim recovery process.

Different rules apply to **repatriating bodies from Scotland and Northern Ireland**.

## Tags

Civil emergencies