

Crash scene photography

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Policy statement and principles

What

Crash scene photography provides vital evidence in serious crash investigations. This chapter details the procedures on how crashed vehicles (which may have been taken to a yard) and crash sites, should be photographed, when forensic photographers should be deployed, and how photographic evidence should be presented for court.

This chapter must be read in conjunction with the <u>Photography (Forensic imaging)</u> chapter of the Police Manual. See in particular the "Digital imaging guidelines" in the chapter detailing procedures for the preparation, capture, protection and use of digital imaging to ensure images are accepted by the courts.

Why

The aim of crash scene photography (forensic imaging) is to:

- record the evidence
- assist in determining how the crash occurred.

How

The photographer should liaise closely with the crash investigator attending the scene as in many crashes it may become necessary to vary these procedures to cover the unexpected.

A crash investigator is usually in attendance when a Police forensic photographer arrives at a crash scene. However, if the investigator has not arrived or is busy, the photographer should not wait. Work should start as soon as the equipment is unpacked.

Images should always be taken at the scene before the vehicles and other moveable evidence are shifted and the road is opened. Once the road is opened, much of the evidence will be destroyed and analysis will become difficult.

Recording the damage to the vehicle before the victims are removed and the vehicle is recovered gives the analyst the best possible view of the vehicle and greatly simplifies making energy-type calculations based on vehicle deformation.

Caution: Do not let this principle delay the extraction of victims or intrude on the need for rescue service personnel to minimise suffering.

Scene images of vehicle damage are important, but rarely provide the information that can be obtained from high-quality images taken at the crash yard. In the yard, the photographer can work in safety and, if indoors, control the lighting conditions. The necessity to re-open roads promptly after a crash may require the photographer to make a judgement call on which vehicle images must be taken at the scene and those which may be left until later.

Staff must adopt procedures that maximise safety and minimise risk. The damaged vehicles may divert the attention of motorists passing a crash scene, increasing the risk to people working on the road. It is essential that employees observe these guidelines and use <u>TENR (Threat, Exposure, Necessity, Response)</u>, Police's operational threat assessment tool, to assess risks to Police and others at a crash scene and when photographing/recording evidence.

For health and safety considerations refer to the '<u>Roadside incidents</u>' chapter of the Police Manual.

Use of specialist forensic district photographers

Difficulties associated with crash photography

Crash photography can yield information of significant evidential value if recorded correctly.

Crash photography requires accurate recording of scale, distance and perspective to depict a roadway or scene as the driver may have been confronted with. Being able to record spatial information correctly requires a high degree of technical knowledge, skill, equipment and training.

Crash photography is inherently challenging due in part to:

- the technical requirements:
 - high end DSLR cameras with interchangeable lenses must be used in manual mode to ensure spatial accuracy
- auxiliary flash and lighting systems are often required to compensate for poor lighting conditions or darkness
- a number of environmental factors that usually impact on the photography, for example:
 - time of day (often at night in total darkness)
 - weather (often in adverse weather where poor driving conditions have contributed to the crash), and
- often evidence is difficult to see due to fuel and oil spills, water on road, harsh lighting conditions (either partial or total darkness, or bright or direct sunlight).

These factors all combine to make crash photography one of the most technically challenging and difficult situations to record evidence.

Failure to record a scene technically correctly, and therefore spatially accurately, can be very misleading making objects or distance appear much closer or further away than they actually were.

When should district forensic photographers be used?

In all situations where scale, distance and perspective are important, a properly trained forensic photographer should be used to ensure evidential reliability of the recorded images. All Police forensic photographers are also trained and equipped to capture 360 degree virtual reality scene reconstructions.

Situations when district forensic photographers should be used include:

- fatal and serious crashes
- crashes involving fleeing driver incidents resulting in death or serious injury
- public transport crashes, and
- crashes with high public and/or media interest.

(See more detailed information on deploying district forensic photographers in the Photography (Forensic imaging) chapter).

However, note also Police responsibilities for minimising road closures and delays in this chapter. See <u>What happens when no</u> <u>photographer is immediately available</u>.

Road closure

Minimise road closures and delays

As all districts have forensic photographers, it is preferable to have them carry out the crash scene photography. (See <u>Use of specialist</u> <u>district photographers</u>'). However, a delay in the photographer's arrival is not sufficient reason to keep a road closed or delay the clean up. Police attending crash scenes must at all times be mindful of the delays road closures cause, and work as efficiently as possible to re-open the road (refer also to '<u>Highway incident management protocol</u>').

What happens when no photographer is immediately available

If no Police forensic photographer is immediately available; and

- heavy traffic is causing unreasonable congestion; and
- the evidence is likely to be important for major charges; and
- the road closure duration is likely to exceed 60 minutes

then the Incident Controller or O/C Scene should decide whether to use other employees attending the scene to record the moveable evidence.

Refer also to incident controller's responsibilities in the 'Roadside incidents' chapter of the Police Manual.

Crash investigators usually carry cameras and these can be used for immediate scene work if the forensic photographer is delayed. The important consideration for the Incident Controller is how to minimise the duration of the road closure without destroying the forensic evidence needed by the investigator.

Strategies for photographing the scene

Overhead photographs

Take overhead photographs where possible of both the scene and the vehicles as part of the scene photography process. These photographs may reveal details not captured by other means.

Aerial views of the scene illustrate the general scene location but are not a substitute for a scale plan or normal scene photography.



(Pre-recovery overhead view)

Timing

If necessary and if you have time, wait for better light conditions before taking the photographs; for example, when an overcast sky has cleared or the sun has lowered in the sky.

This overhead image taken with oblique late afternoon sunlight reveals details in tyre marks that were almost invisible earlier in the day.



(Scuff marks)

Orientation at the scene

Record all moveable evidence

The purpose of at-scene and immediatephotography is to record all the moveable evidence. This includes the position of debris, the relation of vehicles to each other and to fixed objects in the background.

To achieve this purpose, all images taken at the scene, whether general shots or close-ups, must include references that make it clear which area of the scene is being photographed and what the orientation is. If a close-up view of a gouge or scrape has no orientation, or the object has not been included in a general shot, the viewer cannot determine which way is up, down or sideways, or where the object was located.

Orientation markers

One way to show orientation is to use colour and shape-coded identification placards. You will need at least 24 alpha marked A to Z and another 20 numbered 1 to 20.



(Photographic placards)

Another way to orient viewers is to insert a compass rose or arrow in the image to show north. This technique is especially useful for close-ups. It also helps to include a background feature such as a tree, marker post, crashed vehicle or road sign.

Place placards facing the same way on the road to ensure that when you walk through the scene from each direction, viewers can orient themselves by the colour and shape. Do not shift the placards between each series of images.

If you follow these procedures, you will be able to counter legal arguments about areas of road not being photographed and clear up any confusion between placards and plan items.

The "walk-through" procedure

What is a "walk-through"?

Start at one end of the scene and walk through it along the centre line, taking a series of overlapping images. This will ensure that the general location of all significant items is recorded.

Procedure

Follow these steps for a "walk-through".

Step	Action
1	Leave your camera lens on the infinity setting and do not alter it during the walk-through.
2	Do not restrict the walk-through to the area of the debris only. Begin photographing about two seconds travel time before the first visible evidence; that is:
	- 30m in a 50kph area
	- 40m in a 70kph area
	- 60m in a 100kph area.
	These distances are roughly the points where drivers should have had a clear view of the incident and begun starting to react.
3	Take photographs at no more than 10m (10 paces) spacing. The white bars of the centre line are generally spaced at 10m centre to centre and are convenient reference points. For non-evidential photographs the distance may be increased.
4	Ensure that each image has a prominent background object in it that will be referenced on the investigator's plan. For example, use a power or telephone pole or roadside marker post.
5	When you reach the far end, turn around and take another series of shots as you walk back again. As before, walk. on the centre line to provide a constant reference point. Although this is not exactly the view that the approaching driver would have had in either direction, adopting this procedure provides consistency and eliminates cross examination as to whether the view is correct or not.
6	It is then possible to place on the scale plan the photographer's position when the image was taken. This process can be useful if it is alleged that a particular part of the scene was not photographed.

Individual features of crash scenes

Before you start

Once you have completed the walk-through, photograph the individual features. Before taking any photograph, ask yourself:

- Is the placard visible?
- Can the orientation be determined?
- Is a scale included where necessary?

Once you are satisfied that the object and orientation are clear, stand on the centre line at a right angle to the object and photograph it.

Then move up to the object and take a vertical photograph, looking directly down on it. Make sure that the marker remains visible.

Glass

Photograph the spread of glass from the windscreen and headlights onto the road surface. Look to see if there is a centre to the debris field. If so, photograph the spread to allow this information to be noted.

Fixed objects

Photograph any fixed roadside furniture objects (such as Armco barriers, road signs, power-poles, etc.) that have been hit. Note whether they contain parts of the vehicle.

If the vehicle came to rest against a bank, ensure that the bank and car damage is recorded prior to and after the vehicle is removed.

Road gouges and tyre friction marks

As well as photographing a tyre friction mark from the centre line and from immediately above, also photograph looking directly along it in the direction that shows the mark clearest. This is usually the direction the vehicle was travelling. These images are important evidence.

It is often difficult to determine from an image where tyre friction marks begin and end. Place a placard alongside each end and, if necessary, at intermediate points.

If you are concerned that the marks will not show up in your image, try marking their alignment with small 90mm traffic cones. They have the advantage of being light, low to the ground, a contrasting colour and reasonably resistant to wind. They are easily carried, placed, and retrieved and do not leave marks on the road surface.

Speed estimates based on tyre friction marks are dependent on the type of mark so it is critical to be able to prove the type of mark. Ensure that the photographs capture the patterns and angles of any stripes or striations.



(Striations on yaw mark)

The pattern of the mark may be key to disproving an allegation that the tyre was flat and, therefore, caused the crash.

ABS tyre scuff marks

Cars with <u>ABS</u> braking systems leave a distinctive tyre mark. Typically ABS braking marks appear as a series of short (0.5 metre) skids separated by unmarked gaps. As these short 'skids' can be very difficult to see a polarizing filter may be advantageous.

Skid marks on wet roads

Skid marks may appear as light grey or whitish marks on a wet surface. Mark and photograph these marks the same way as for dry road surfaces.

Documenting the scene photographs

Follow these steps when documenting the scene.

Step	Action
1	Document the objects photographed. You can do this using a dictaphone or your notebook. Often, it will be obvious what the object is, but close-up photographs of road surface debris, tyres, tyre marks or other marks on the road can be confusing.
2	Because the analyst reconstructing the crash will not always have visited the scene, it is helpful to create a legend for each image This can be a transcription of your notes recorded at the scene.

See also: Presenting photographs in this chapter.

Working in adverse conditions

At night

Effective photography at night requires specialist techniques and equipment. Police forensic photographers have the necessary equipment and capability to use such techniques as 'filling or painting with flash'. If forensic photographers are not available, use any available light source to illuminate the scene or object being photographed.

Establish priorities as it is not essential to capture every last detail. At the least, capture the fragile removable evidence and mark the important areas.

In bad weather

While rain or snow can make photography particularly difficult, it is not permissible to wait for the weather to clear before taking your scene photographs (unless the road has been closed by the adverse weather). It may be possible to postpone some photography until the weather changes. If not, you can reduce the reflection problem by positioning the flashgun at least 30cm in front of the camera lens. Your approach will be determined by the circumstances of the scene.

General vehicle shots

Angle and bodyline

Take general shots of the vehicle at right angles to the vehicle, with reference to its natural bodylines.



(Minimum vehicle photographs)

The primary reference points for photographing vehicles are:

- the A pillar, which supports the driver's door
- the B pillar, which supports the rear passenger doors (if any)
- the C pillar, which is usually directly above the rear wheel, supports the roof and often forms part of the rear mudguard assembly.

To fully capture a vehicle photographically at least 16 photographs are required along all body lines.



(16 photographs required along body lines)

Where possible obtain an overhead photograph as it is invaluable evidence.



(The side on photograph)



(The overhead photograph)

Photograph the **entire** vehicle. An image of the undamaged side may be as important as the damaged side. It may prove that the undamaged side did not hit something else and it will show what the damaged side should look like.

Where extensive deformation has occurred, additional close-up images will likely be required. Ask the crash investigator if there are any items of particular interest that must be photographed.

All images should be taken from a **constant distance** from the vehicle, using a tripod. This allows horizontal images at a**constant height** and lens distance between the camera and target. It is recommended that you set the camera lens at door-handle height.

When photographing a vehicle at a crash recovery yard, the goal is to portray the vehicle as closely as possible to the position and condition it was in when it came to rest. To achieve this, you should replace the roof and close any doors that were removed to extract the victims. Replacement of these items allows the crash investigator to determine the alignment of the vehicle during the impact sequence and assess the extent of the compression. Both of these are vital for an advanced analysis.

By keeping to a standard procedure, the investigator can explain all damage in terms of impact damage and recovery-related damage.

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Photographs of specific areas of the vehicle

Specific areas of vehicle may need particular attention

Take close-up and overhead photographs of areas and items that need particular attention. The crash investigator will usually give advice on this but some of the common areas are:

- wheels
- tyres, including deflated tyres
- headlights including bulb filaments
- interior.

Wheels

If any of the wheels have been shifted or displaced during the impact, carefully record this by taking the photographs at right angles to the natural body lines.

Tyres

Photograph any foreign material deposited on a tyre or tyre wall, such as paint from a traffic island, rubber marks from another vehicle or similar. This material may be critical.

Ensure that you include:

- the wheel identification labels
- the detail words on the sidewalls
- all aspects of the damage
- the vehicle tyre tread.
- any unusual marks.

Deflated tyres

Sometimes a deflated tyre is found after a crash. Photographing the wheel/tyre will enable an analyst reviewing the photographs and the tyre scuff marks to determine tyre deflation prior to impact and decide whether heavy braking was occurring.

You may need to photograph the wheel assembly at the studio.



(Inside face view of tyre)

Photograph the **wheels**. This is particularly important if the tyre marks are in any way irregular. If you do not have an inside view of the wheel, make sure that the location of the tyre value is visible.

Ensure that the image shows the edges of the mark on the tyre. This can assist the crash investigator in determining the state of the tyre pre-crash.



(Tyre run flat and showing casing damage)

Photograph both sides of the tyres and wheel rim. These photographs will show whether possible rim distortion on the inside of the wheel caused a loss of inflation pressure.

You may need to photograph the inside of the tyre. Damage to the inside of the tyre is essential evidence in assessing what destroyed the integrity of the pressure chamber and may be critical to establishing the cause of the crash. Check with the crash investigator about the need for an "expert" tyre examination before the tyre is removed from the rim.



(This image shows the overheating, abrasion and sidewall ruptures consistent with prolonged "flat" running)

Finally, look for an object that may have caused the tyre to deflate. If it is found, take careful photographs of the object and the damage.

ABS brake marks on tyres

The cyclical action of <u>ABS</u> braking systems results in three types of tread marks, constituting evidence that the brakes were applied before the crash.

The marks are faint and fragile, so take great care when searching for and recording them. Photograph them**before**the vehicles are moved from the crash scene. Even towing the vehicle onto a trailer will eliminate them.

This picture illustrates the three types of marks caused by ABS braking.



(Incipient, scuff and full lock up)

The speckling at location **1** is an indication of incipient lock up. It indicates that the driver was applying full emergency braking. This type of tyre stress mark is easily destroyed, disappearing after one or two tyre rotations, yet it is distinctive when fresh.

Location **2** shows that the tyre has been sliding and has developed clear tread polishing. It indicates that the tyre has almost locked. This is caused fractionally before lock up occurs.

Location 3 shows the conventional melt mark. It indicates that the wheel has been held locked. The red arrow indicates tread damage.

Headlights

If the headlight mounting pans have been displaced, obtain right-angle images of the front corners so that displacement can be determined.



(Displacement of headlamp pan)

Try to photograph the lamp filaments. You may need to do this in the laboratory. The crash investigator will probably require the lamp for first-hand evidence.



(Headlamp filament damage)



(Motorcycle filament intact post-crash)

Follow the same procedure for rear lights.

Interior

Photograph inside the car. Record the position of the driver controls, including the gear lever. If the crash occurred at night, record the position of the lights switch. Make sure that this evidence has not been interfered with **before** the photograph is taken.

Note: Damage to the steering wheel may prove that the driver was not wearing a seat belt.

Dealing with crashes involving pedestrians

Police photographer required

Pedestrian crashes must be attended by a Police photographer because the forensic evidence is minimal and frequently requires careful exposure to record.

Procedure

Follow these steps when you have to photograph crashes involving pedestrians

Ste	Action
1	As with a vehicle crash, if necessary, close the road but exercise some caution. On a multi-lane road where all evidence is in one lane, it may be appropriate for the other lanes to continue to flow. Protection of the scene is important. Otherwise, well-meaning members of the public will pick up items held by the victim and place them tidily on the footpath while vehicles driving through will destroy evidence on the road.
2	Locate items such as clothing, particularly shoes, and articles the victim was carrying. These may be critical in determining the area of impact. When photographing, remember to mark the items so that their location and orientation is captured.
3	Look for a faint smudge or scuff mark made by the shoe as it was initially knocked across the road surface by the impact. Take careful and precise photographs, with the orientation clearly shown. This shoe scuff mark will establish the area of impact beyond all argument.
4	Examine the road for evidence. If the victim has torn clothing or extensive grazes caused by road surface contact, somewhere on the road surface there will be clothing or flesh fibres. Such evidence is extremely fragile and readily disturbed by passing traffic.
5	Examine the vehicle for evidence. This may be at the scene or after removal to a secure site. Try to identify and record skin and clothing abrasion marks on the vehicle. In particular, make sure the leading edges of the striking object are photographed.
6	Pedestrian related dents on car panel work are often minor and difficult to record. You may have to vary the exposure rate.



(Overhead view of dented bumper, leading edge and bonnet from pedestrian impact)

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Dealing with crashes involving motorcycles

Follow these steps for crashes involving motorcycles.

Step	Action
1	Examine the road for evidence.
2	Photograph marks created by the sliding motorcycle.
3	Look for scrape marks made by the rider's clothing and photograph those.
4	Identify and photograph any object that may have caused gouge marks on the motorcycle. Photograph the object and any mark on it.

Motorcycle photographs

General photographs

Photograph the motorcycle at right angles to its natural body lines and with it standing on its wheels where possible.

If it is clear that a primary force of impact has come from a particular direction, take a photograph from that direction at the height from which it approached. Take an overhead photograph.

Photographs of specific areas

Handle bars

Photograph any damage in the handle bar area. This is particularly important if the rider has gone over the handlebars as it is possible to cross reference the rider's injuries with the motorcycle damage, and thereby help distinguish between the rider and the pillion passenger.

Engine

Often, a motorcycle slides along the ground before it becomes stationary. Photograph the end covers on the crank case. The angle and depth of any gouge marks will indicate the direction of travel and rotation.

Tyres

<u>ABS</u>-type marks are also found on motorcycle tyres and may be the only evidence that the motorcyclist was braking heavily.

Even if brake marks are absent, it is important to record the width of the polishing to the tyre. The tyre in the following image has been subjected to maximum braking. Images of this type of evidence are invaluable to the crash analyst.



(Motorcycle front tyre shows locked wheel scuff and incipient lock up speckling) This image shows braking scuffs on the rear tyre.



(Brake mark - rear motorcycle tyre)

Bicycle photographs

The analyst needs to know which 'cogs', front and rear, the chain was on when the bicycle crashed. By counting the teeth it is possible to determine the ratios and calculate a probable range of speeds. Carefully photograph the chain ring (front) and casette cogs, recording the chain position and number of teeth. All equipment fitted to the bicycle (including brakes levers, cables and pads) should be photographed.



(Top - bicycle rear cassette and derailleur detail. Bottom - bicycle chain and chain-ring detail)

Photograph any other damage as per the procedure followed for amotorcycle.

Taking photographs of victims

Victims inside a vehicle

If possible, photograph the locations of vehicle occupants in the vehicle; but remember common decency and the need to preserve life are the primary concerns.

It is important to photograph **all** the bruises on the victims. This may assist in determining the impact sequence and the victim's position within the vehicle.

Victims outside a vehicle

For crash analysis purposes, it is not necessary to keep the body at the scene and photograph it "in situ". All the analyst needs to know is where it was, which way it was oriented and who it was.

After removing the body, record **where** the body was located. Mark the road with a line at the feet and an arrow at the head pointing the way the victim laying.



Important: Never paint an outline of the body on the road.

Pedestrian victims

Record the evidence on the victim's body. When a person hits the ground after being struck by a vehicle the victim will sustain abrasions when sliding to a stop. Passengers jumping out of moving vehicles have the same characteristic grazing. Search for and record these marks (which may include skin or other body tissue or clothing fibres) on the road surface.

Photograph damaged clothing that the person was wearing and record the items in the written file. You may need to explain to ambulance and hospital personnel that you need to photograph the clothing before it is disposed of (also refer to pedestrian crashes).

Motorcycle victims

As with pedestrian crashes, a motorcycle rider will hit the ground and slide some distance before coming to a stop. Examine the clothing for scrape marks. As with a pedestrian crash, you may need to explain to ambulance and hospital staff your need to photograph the clothing before it is disposed of (Refer also to <u>motorcycle crashes</u>).

Photographic equipment

Cameras and lenses

You can take excellent photographs with a very simple camera. The best lens is the standard 50mm type. Do not use wide-angle, telephoto or macro-type lenses as these can result in distorted images.

Digital cameras are the most widely used and accepted. To preserve the ability to obtain clear enlargements, it best to have the highest pixel resolution available and have the camera set to that figure.

Flash requirements

Many crashes occur at night and often during rain, so flash equipment and special procedures are necessary.

If you do not have the equipment, get it or delegate the task to someone who has. It is unacceptable to keep roads closed until daylight, and requests to do this for photography reasons only should be disallowed. Excellent results can still be obtained at night.

Tripods

Though tripods can be cumbersome, they are good insurance against technically bad pictures as they:

- reduce the chance of camera movement spoiling a picture
- allow slower shutter speeds and smaller aperture settings.

Note: For technical crash investigation photography, a tripod is the only way to get constant lens height and distance from the vehicle.

Placards

You need at least 24 placards marked A to Z and another 20 numbered 1 to 20. They should have a square face, an inverted triangle rear and a border on both sides.

The letters/numbers and borders must be reflectorised and colour coded - that is, a different colour on each side. One common colour should be used on all the faces and another common colour on the reverse. This picture shows the preferred type.



(Photographic placards)

Labels

Put labels on objects that can be hard to identify if not clearly marked. For example, in the absence of a label, you cannot tell from an image of a tyre or a wheel which of the four tyres or wheels it is.

Important: Use a clear, tidy label. This portrays a professional image.

Presentation of photographs

What you must present

You will need to produce at least three books of images; one is needed for the crash analyst, and one for the judge and/or coroner. Local arrangements may require more. The defence may also require photographic-quality reproductions.

For the crash analyst, produce a spiral-bound book of your best images but also supply a CD ROM of all images. The defence will likely request copies of **all** images taken, so the analyst must see them in case they are brought into evidence in court. It is preferable that you consult the crash investigator when deciding which images to include in the court book.

Ask the crash investigator which format is required on the CD Rom. Generally, JPEG images produce the smallest file, while TIFF files produce the best image. The CD-ROM is a good way to record the images that are excluded from the court book. Remember to include an index.

The judge and/or coroner will need a book of similar-quality images. This copy should be glue bound. Depending on local arrangements, a laser copy may suffice for the defence. All other copies that are needed - for example, for a jury - can be laser printed.

Size

Print images in 5R, which is approximately 180mm by 128mm (5 x 7 inches). This size achieves a good balance between size and detail.

Numbering

Use a consistent numbering scheme for the pages of the book; for example, a small white dot in one of the lower corners with a number hand-written or stamped. Wherever possible, provide a legend. For example, the transcription of your notes recorded at the scene.

Photographs of bodies

It is a good idea to place all images that include bodies in a separate binder. This process provides dignity to the deceased and reduces chances of embarrassment at court or other proceedings.

If it is possible, ask that the above images be removed from the file before it is forwarded to any other party (excluding defence solicitors), unless they are of particular evidential value. Except in the case of pedestrians, motorcycle riders and passengers inside a vehicle, they provide little information that cannot be obtained from the pathologist's report.

Digital imaging guidelines

It is critical in law enforcement that a digital image (photograph) can be verified in court as an authenticated copy of the original digital image.

Frontline employees must follow the guidance in this section which simply outlines the digital imaging process to:

- ensure any images they take will be accepted by courts as reliable evidence
- minimise the risk of legal challenges around whether the image could have been compromised
- supplement more detailed guidelines (the Australasian Digital Imaging Guidelines) used by Police forensic photographers.

Please refer to the <u>Digital imaging guidelines (Taking, downloading and securing images</u>) in the 'Photography (Forensic imaging)' chapter.

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Aide memoir - crash scene photography

Item	What you should do, or what you should have on site
Equipment	- Still camera with 50mm (full size CCD sensor) lens, tripod and tape measure.
	- Lens filters - polarising is essential.
Health and safety	- Protect the scene and workers. Use crowd control tape, cones and flares.
issues	- Maximise safety-Minimise risk by applying TENR, Police's operational risk assessment tool.
Scene preparation	- Place placards/labels on all objects to be recorded, including tyre friction marks.
	- Place scale tape (if available) on vehicles.
	- Place scale tape or ruler on road surface objects, if no background scale is available.
Scene action	- Walk through, along the centre line, photographing the scene. Do this in both directions.
	- Photograph surface objects at right angles to the centre line and from immediately above.
	- Record the spread of glass and other debris fields.
	- Ensure that you capture the start of the crash and the tyre friction marks created by the vehicles.
Vehicles	- Photograph at right angles along body lines.
	- Photograph the tyres.
	- If any tyres are flat, give extra attention to any tyre friction marks on the road surface.
	- Replace the doors and roof, if they have been removed.
	- If possible, take overhead photos.
Victims	Photograph victims
	- if:
	- their location or other evidence suggests the occupants were not wearing seat belts
	- their position or bruising will help prove who was driving
	- they provide slide-to-stop evidence.
	- Where applicable, photograph pedestrian, cyclist and motorcyclist clothing to record slide-to-stop evidence.
	- Exercise great care and sensitivity.