

Disaster Recovery Funding Arrangements

Practical guide to photo evidence

This tip sheet aims to assist applicants in meeting the visual evidence required when applying for funding under the **Disaster Recovery Funding Arrangements (DRFA): Reconstruction of Essential Public Assets (REPA), Emergency Works (EWK) and Immediate Reconstruction Works (IRW)**.

Under the Commonwealth DRFA, eligibility for funding to repair or reconstruct eligible assets damaged by an activated disaster hinges on an applicants' ability to provide visual evidence, such as photos that demonstrate:

- the pre-disaster and post-disaster condition of the asset, linking the claimed damage to the eligible disaster
- the post-disaster condition of the asset, including the exact location, nature and extent of event damage to the eligible asset and claimed reconstruction works
- the proposed or completed works are in line with the pre-disaster function of the asset and
- the claimed IRW or REPA approved scope of works was fully completed.

Quality, well managed, JPEG photos that include EXIF metadata, GPS coordinates and time/date taken are the most effective way to support each event damage site and each damaged component of eligible assets, and the scope of reconstruction works.

How many photos? Photos need to be sufficient to demonstrate the:

- exact location, nature and extent of event damage to the eligible asset damage sites and each damaged component
- pre and post disaster condition of the asset demonstrating new damage to the asset is caused as a direct result of the event
- proposed scope of works - treatments and quantities required to reconstruct the event damage to the asset components and
- claimed scope of works is in line with asset pre-disaster function.

Metadata? Ensure photos are geotagged with GPS coordinates/metadata, and saved as JPEGs.

Timeframes? Ensure visual, geotagged photos and other evidence is **collected within the eligible timeframes**.

- **REPA and IRW: pre-disaster condition evidence DRFA eligible timeframes**
 - **Local governments** – latest available evidence but **no older than four years before the event**.
 - **State agencies** - latest available evidence but **no older than two years before the event**.
- **REPA: post disaster evidence DRFA eligible timeframes** collected as soon as practicable following the event, but must be collected **no later than 12 months after the event**.
- **REPA: completion photo timeframes** –taken as soon as practicable after works are completed demonstrating the completed approved works, ready to be lodged with the close out submission.
- **IRW: post disaster evidence eligible timeframes** –collected as soon as practicable following the event and must be collected **prior to undertaking EWK or IRW works**, supporting exact locations, nature and extent of event damage to assets and the scope of works
- **IRW: completion photo evidence timeframes** –taken as soon as practicable after works are completed demonstrating the claimed completed scope of works.
- **EWK: post event damage photo timeframes** - taken during and after the event and prior to or while undertaking EWK, sufficient to demonstrate impact of the event on eligible assets and the need for the claimed emergency works,

Continue to [Checklists](#)

Continue to [Photo evidence examples](#)

QRA website: <https://www.qra.qld.gov.au/funding-programs>

Detailed requirements	<ul style="list-style-type: none"> • QDFG Section 9 • DRFA 2018
References and tools	<ul style="list-style-type: none"> • MARS User guides and Forms • DRFA Toolbox: Tip sheet 6 – Pre and post disaster condition evidence • Applying for DRFA funding
Need help?	Contact your QRA Regional Liaison Officer (RLO)

Checklists

Preparing for damage photo and data pick up

- Tools:** straight-edges, wedge measures, tape measures, rulers, spray paint, chainage wheels are on hand ready for use in evidencing damage locations, dimensions and supporting scope
- Camera** – use a GPS-enabled camera/device to capture the metadata and exact location of event damage to assets
- Camera settings – IMPORTANT Check:**
 - **resolution** is set to medium/high
 - **GPS is on** and **reporting the correct location**
 - **date and time are correct**
 - **photo direction/orientation functionality is enabled**
- Battery** –ensure battery is fully charged, and back up charger is charged and packed, or back up batteries are packed
- Memory / memory card** –card / storage space is available, phone/camera memory /spare memory card are available
- Best time of day** – early morning and late afternoon provide optimum contrast to capture damage to road surfaces – watch out for glare or dark shadows from trees
- Angle of photos** – position yourself down low where required to capture distinctive damage features e.g. pavement deformation or washouts, or blocked or damaged culverts and pipes, and support the proposed scope and quantities
- Highlight damage** – where damage is hard to see. For example use spray paint to highlight the nature and extent of event damage and support the proposed length, depth and width of reconstruction works
- Capture dimensions** – use a ruler/tape measure /straight edge to demonstrate depth/width/distance, and for large damage sites consider using a vehicle or scalable feature to demonstrate size and scale
- Take photos sequentially, at set intervals in one direction along road asset chainages** where consistent event damage has occurred, to demonstrate the nature and extent of damage and the proposed scope of works
- Stop and take close-up photos** where required to highlight event-related damage, function of the asset and **all damaged asset components**. E.g. transport or stormwater infrastructure components: pipes, culverts, headwalls scope
- Use levels or ruler/tape measures/straight edges** to support dimensions of depressions, sinkholes and orientation at the chainage and enable assessment of the event damage to the asset and proposed treatments and quantities

Photos of completed works

- Ensure **completion photos include metadata and GPS coordinates** map to the approved line item scope and sufficiently demonstrate completed treatments and extent of completed works in line with approved scope.
- Take completion photos sequentially along the completed works, where possible in the same direction as post event damage photos.
- Ensure completion photos demonstrate the extent of completed approved works on assets and components.
- Ensure photos are taken as soon as practicable after works are completed
- Ensure photos are captured and managed as JPEG files

Note: Completion and inspection photos may also be used as additional evidence if required to demonstrate asset condition should an asset be damaged by a subsequent event.

Saving and managing photos

The Management and Reporting System (**MARS**) portal enables applicants to bulk upload photos into submissions. To prepare for uploading to MARS, it is recommended that photos be saved in folders, by asset using descriptive file names, e.g. asset name and chainage. It is also important to use clear file references and always back up files.

MARS photo evidence

Preparing to upload photos to MARS:

- Ensure **photos are JPEG format** with embedded metadata
- Ensure each photo has a unique name
- Ensure each **photo file name is no more than 100 characters**
- REPA and IRW submissions Refer to the [MARS Portal bulk photo upload](#)
- EWK submissions: Ensure unique photo file references have been entered into the relevant Excel submission form photo fields ready for bulk upload - names are entered **in the following format:**
name.jpeg|name1.jpeg|name2.jpeg
A photo conversion script can also be requested via your Regional Liaison Officer (if required).

Other supporting evidence

Supporting evidence, other than photos, may also be lodged:

- pre-disaster** condition evidence including geospatial data, videos, maintenance records or asset registers
- post disaster** evidence such as geospatial data, satellite images or asset inspection reports.

Where there are inconsistencies between this tip sheet, the Australian Government DRFA and the QDFG, the DRFA will prevail.

Photo evidence examples

Use a straight edge, tape or ruler

Use a straight edge / rule to demonstrate subsidence, shoving, sinkholes or scours to the asset caused by the event and to support proposed treatment and quantities. Where possible capture full length of the straight edge, and separate close up/s of the depth. .



Using mark ups



Mark up showing dimensions of event damage and proposed scope.



Mark-up identifying the damage site within the asset context



Close up, angled views of marked up undermined site.



Series of four photos utilising asset mark up, straight edge and measures to support extent of damage at the site, depth, width and length



Close up



Photo taken back along the site

Photos demonstrate the exact location, nature and extent of event damage and the scope of works

Capture consecutive, evenly distanced post event photos to clearly demonstrate the full extent of damage caused by the event as well as the full length of each treatment and quantity required to restore asset to pre-disaster function.



Above examples consistently spaced photographs along the asset demonstrating event damage



Above - examples of photos at regular intervals in the same direction along asset to support the extent of the event shoulder scour and scope of works

Below – Series of sequential post event photos, captured at regular intervals demonstrating the continuous extent of the shoulder scour damage to the asset. Photos taken from vehicle, as well as close up demonstrating depth of scours & quantities.





Road assets - culverts and headwalls

Below is an example of a selection of photos demonstrating **pre** and **post** disaster condition of the asset, the **location, nature and extent of damage to the asset** and components and the proposed treatments and quantities.



1. Post event photo approaching crossing.



2. Downstream view pre-event condition, post event silt & debris.



3. Upstream view of the extent of event damage to the asset components.



4. Closer upstream view of damaged components.



5. Closer view showing undermining and damaged components.



6. Rock protection displaced downstream.



7. Photo further demonstrating extent and scale of event damage at site.

Road assets – floodways and crossings



Tape demonstrating displacement of pipe



Photo inside pipe showing displacement



Undermined displaced floodway



Detail of displaced pipe during investigation



Undermined floodway



Undermined floodway



Approaching undermined floodway



Side view further demonstrating extent of undermining`



Post event photo of road and culverts undermined by the event



Side view of scouring



Close up of scour



Completion photo (for close-out)



Post event photo downstream view of rock built up against culverts



Side view extent of rock deposited against the culverts



Completion photo (for close out)

Landslips

Ensure photos show the context of slip and the **location, nature and extent** of impact on the eligible asset. Scope may be supported by a geotechnical report.



Landslip 1 – post event downside slip along asset



View back at slip and asset



Close up of asset surface



downside slip view



Above Landslip 2 – Drone view showing context and scale



Scope of works in progress



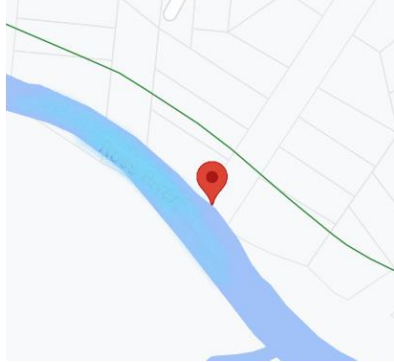
Landslip 3 – above post event photos



Above - Completion photos

Stormwater infrastructure

Above – sequence of photos demonstrating post event condition of a stormwater asset components, the **location, nature and extent of event damage** to support the proposed scope of works.



Above – geotagged photos demonstrating location of the stormwater infrastructure mapped in MARS.



Above –geotagged photos demonstrating the completed approved scope of works (for close out)



Above - post event photos demonstrating location, nature and extent of event damage to stormwater infrastructure



Above – geotagged photos demonstrating the completed approved scope of works (for close out)

Emergency Works on essential public assets Transport infrastructure photo evidence examples



Post event drone view of road crossing



Geotagged photos taken after waters receded supporting the event impact on the asset and the need for the completed clean up emergency works



Completion photo. Note - completion photos are not mandatory evidence for Emergency Works submissions, however are good practice to collect and use to inform the related REPA submissions

Above - three photos supporting Emergency Works on a crossing.



Above –geotagged post event photos supporting the need for clean up of flood debris impacting bridges and flooded crossings



Above – geotagged photo examples of post event pothole damage requiring emergency patching



Above – examples of post event evidence supporting the event impact on assets and the need for the emergency works

Emergency Works - Public infrastructure photo evidence examples



Above – State education infrastructure - Post event geotagged photos demonstrating the location and need for emergency works to remove event related debris impacting on school infrastructure. **Clean up costs *not* covered by insurance may be claimed under DRFA.**



Above State Health infrastructure - geotagged post event geotagged photo examples demonstrating the location and need for emergency works to remove event related debris impacting on health infrastructure. **Clean up costs *not* covered by insurance may be claimed under DRFA.**

How *not* to capture photos?

Review photos prior to lodging – if you can't see damage to the asset caused by the event, neither can QRA.



No event damage evident



No event damage evident



Avoid distortions created by fish eye or wide angle lens cameras mounted on car exterior. Use of level above is ineffective



Avoid shadows that impact on desktop assessment of photo evidence



Unable to identify the post event damage to an eligible essential public asset. Use the associated line item fields 'Asset Type', and 'Damage description' to clarify how the post event photos relate to the claimed REPA scope, or if unrelated remove photos to avoid queries



Photos taken through windcreens, and dark shadows across asset do not show extent of event related damage to the asset



Double check photos before lodging to ensure the ad hoc props support the claimed damage, treatment and quantities

