

# HARD DRIVE RE-USE BEST PRACTICES FOR PRODUCTION & POST

Key advertising industry trade bodies align on new industry best practice to safely re-use hard drives throughout advertising production and post processes.

## The New Industry Best Practice

Once hard drives have been wiped and tested before use, all "Enterprise Class" drives should be reused multiple times during the manufacturer's declared warranty period, provided such reuse would not put the agency or production company in breach of any of its contractual obligations.

## The problem with single use hard drives:

Currently, our industry uses hard drives as single-use items. Working in this way contributes to unsustainable mining practices and raises concerns about rare element depletion and environmental degradation. The carbon associated with an average 5TB hard drive, (static or spinning) from manufacture to responsible disposal, is around 200 - 250kg of CO<sub>2</sub>e – a significant percentage of the carbon footprint of an average production.<sup>1</sup>

The average carbon cost of storing a 5TB job to hard drives is **400kg of CO<sub>2</sub>e**, the equivalent of driving from NY to Miami (1200 miles), in an average combustion engine car<sup>2</sup>

## The impact of reuse is:

On average, archiving a 5TB commercial shoot on twin LTO tape vs. hard drives will result in a carbon savings of 90%, when compared to the current practice of single use hard drives.

Re-using those hard drives and storing onto LTO instead, creates a savings of **370kg of CO<sub>2</sub>e**, or just over 90% of the carbon.<sup>3</sup>



Did you know that the **Film and TV industry** already abide by similar best practices when it comes to the re-use of hard drives?



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1. [Film Locker Global](#)

2. [Film Locker Global](#)

3. [EPA 2023: passenger vehicles](#)

# Frequently Asked Questions

## Can you please elaborate on the new best practices?

Sure, here's a checklist:

- Use high-quality, Enterprise Class hard drives (check product box and price point to be sure).
- Use hard drives for up to their period of warranty (also listed on the box).
- Wipe hard drives following the advice below.
- Always have a back-up hard drive (also re-used).
- On completion of project, archive the project onto twin LTO tapes rather than on hard drives or in cloud services. - I.T practices would always dictate two tape copies held in separate locations as a minimum for security and redundancy.

## How many times can I write to a drive before it goes bad?

Drives come with a period of guarantee which assumes a certain quantity of data can be written and erased each day. This is often referred to as "Drive Writes Per Day" (DWPD) or in "terabytes written" (TBW). For example, if a Solid-State Drive (SSD) has a capacity of 200 GB and comes with a five-year warranty, which means users can write and erase 200 GB onto the drive every day for the warranty period before it fails. SSD's have an average TBW of 150 in its lifetime and last on average 25% longer than HDs.

## Is there a security risk using a drive for multiple clients/projects?

So long as the drive has been wiped and tested, the risk is minimal.

## Aren't new hard drives required by insurance?

According to top industry insurance brokers across the UK and US, contractual agreements will rarely stipulate the use of new hard drives. The requirement is typically around equipment being tested for soundness before shooting. However, it is recommended parties check with their own insurers for clarity.

## What are best short-term storage practices to ensure a long lifespan for the drive?

Keep hard drives regularly used in the production workflow, in a safe, flat, dry space and avoid extreme temperature fluctuations. Note that humidity plays only a small part in predictive drive failure (see paper by UseNix) whereas errors made in transport (i.e. dropping the device) are a more common contributing factor to breakage and/or data loss. If drives are stored for the long term, (not advised) then the static environment is a consideration and note that data loss is a risk. Aside from that, storing them in a safe, flat, dry, non humid environment is best. Normally a standard workplace / office provides a decent environment.

## If not hard drives, how should we be archiving assets?

Archiving on hard drives and in the cloud will instantly increase a project's carbon footprint, therefore, we recommend twin LTO tapes, an industry standard format that is robust, reliable, and low carbon. Tapes are guaranteed for up to 30 years. Data retrieval should take no longer than 24 hours. Always make two copies to tape and store in separate locations.

## How do we get HDs back to reuse?

Many software solutions exist to wipe data from external drives. It's possible to use the installed 'disk manager' on both Mac OS and Windows to wipe a drive. The existing data and any empty space on the drive is overwritten with 'random data' and choosing 'two passes' offers good security. Crypto erasure is sometimes used by DIT's to wipe drives for reuse on set with specialist software.

## How do I ensure my data is truly wiped from the drive?

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## If the client transfers the data to LTO and returns the drives to production, is the production company taking a risk by re-using a drive that's been out of their possession?

If the drive is still in warranty and is wiped and tested, then there is minimal risk in reusing the drive. Production companies are generally obligated to reuse equipment that is 'tested and fit for purpose' as part of their contractual agreements with clients, agencies and insurance companies.

## If the production company is required to provide drives back to the client at the end of the job, how can re-use happen?

Once data is transferred off the hard drive and into long term archival (ideally LTO), then the client/agency can make the drives available for the production company to reuse. If the data is being stored sustainably then this will be a simple process. Please inform your agency/client to store the data on LTO and return the drives for re-use.

## Beyond the hard drive re-use and the LTO tape, are there ways I can reduce the carbon associated with this archival process?

Consider all factors associated with the process, including (but not limited to) transportation. Whenever possible, use couriers that rely on EVs, hybrid vehicles, motorbikes, bicycles or walking to transport the drives. Ensure data is not replicated multiple times across drives, and that all files are clearly labelled and organised.

## Are there cost implications?

Re-using hard drives is a cost effective way to manage production assets. Clients should be charged for the long-term archiving of their projects (everything else is charged for, only long term data storage is not!), and a fee for a term (normally 5 years but check your contract), can be charged upfront and this used to archive to twin LTOs. In addition to the contractual obligations, it is reliant on the client agreeing to any cost/timeline implications (that result from this process/using a 3rd party company).



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