

Info Sheet 03

Build in an eco-friendly way

Practical info sheets to help with eco-friendly set design, training teams and reducing waste during film production.

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Phase 1: The “reverse design” of construction preparation

Head Set Designer

1st & 2nd production design assistant

Construction Coordinator

Outdoor Materials Location Manager

Head Painter

The Construction Coordinator's role

Manager appointed by the Head Production Designer. Their role consists of implementing the construction and technical execution of sets. They coordinate and manage teams from different trades, ensuring that everything complies with safety and hygiene rules.

Remember: 80% of the sets built are destroyed after only a few weeks of filming.

Reverse design construction serves a dual purpose: on the one hand, **it limits the purchase of raw materials** as much as possible **by favoring the reuse of standardized, removable, and reusable materials** and decorative elements; on the other hand, **it designs these elements so that they can be reused after filming, thus extending their life cycle**.

This approach involves:

- **Thinking about assembly and disassembly during preparation.** The dismantling, rental returns, dumpsters, and storage of sets (for example, for a series from one season to the next) are planned in advance, as soon as the budget is drawn up!
- **Incorporating as many second-hand items** as possible into the plans from the outset, sourced from recycling centers or websites that resell deconstruction materials.

Phase 1: The “reverse design” of construction preparation

- **Sourcing materials from rental companies, recycling centers, or reuse platforms** in order to obtain suitable materials (set panels, fixtures, doors, windows, flooring, wallpaper, materials, etc.).
- **Repair and adapt the repertory panels, favoring reversible assemblies** (screwing the panels rather than gluing them makes it easier to dismantle and reuse the wood).
- **Build a new type of stand.**
- **Build blocks with modular windows.**
- **Use certified materials or alternatives** to the most polluting products.
- **Use service providers who specialize in sorting**, recovering, and upcycling waste.

Non-exhaustive list of resource centers for reusable materials for the cultural sector (in France):

- ArtStock (92)
- La Ressourcerie du Cinéma (93)
- La Réserve des Arts (93)
- La Ressourcerie du Théâtre de l'Aquarium (75)
- Les 3 Portes (27)

Phase 1: The “reverse design” of construction preparation

To allow time to **incorporate recycled elements**, which often have different dimensions, **it is recommended that the outdoor materials manager or a second or third production design assistant be brought in as soon as the plans are sufficiently advanced**. This extra time and effort will be more than compensated for later on, thanks to time saved during assembly (greater precision of shapes) and patination.

After the plans have been approved by the head production designer, the construction coordinator can implement a reverse design approach while maximizing the integration of existing elements.

Dialogue between the construction coordinator, head painter, and head production designer is essential prior to construction. Indeed, the finish of the set panels and the choice of mounting have an impact on the technique used by the chief painter for coating the set panels.



Les 3 Portes : stock of windows, doors, shutters, decorative panels, etc.

Catalogue on request from Philippe Boulenouar :
les3portes@yahoo.com

The National Network of Artistic and Cultural Resource Centers (RESSAC) brings together stakeholders in cultural reuse to work on common issues and share their expertise.

<https://www.ressac.org/>

The **Opalis directory** lists professional operators who sell reusable materials from the demolition of old buildings and structures in France, Belgium, and the Netherlands.

<https://opalis.eu/fr>

Phase 2: The production design sheet

Head Carpenter

1st assistant carpenter

Outdoor Materials Location Manager

To create sets, the construction team builds fake walls from assembled wood panels, onto which painters apply various materials: paint, coatings, wallpaper, fabric, etc.

Each wooden panel is supported by vertical supports: struts or brackets.

Modern stage flats generally consist of a rectangular frame made of battens (or cleats) of softwood, one side of which is covered with plywood (poplar or okoumé wood). The parts are assembled together using either screws, nails, or glue.



Stage flats stored at Ressourcerie du Cinéma
© Valérie Valero

The **manufacture of stage flats** and their supports accounts for an average of **60 % of the carbon footprint of a studio set!** However, they are usually discarded after filming.

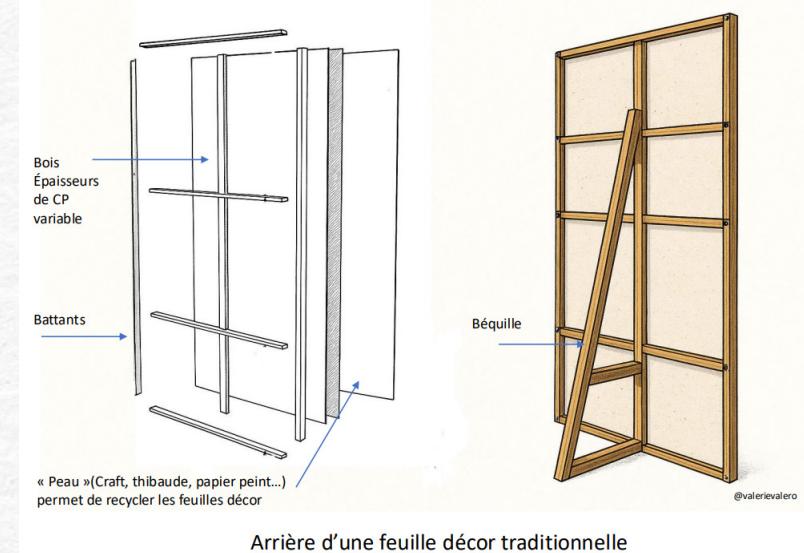
72% of professionals believe that 30% or more of a set can be made from removable and reusable panels.

(Source: Survey on production design practices: implementing eco-responsible solutions by Samuel Zarka, the Eco Déco Ciné collective, and Film Paris Region, 2021)

Phase 2: The production design sheet

Reducing the environmental impact of stage flats

Although there are several sizes of decorative panels available and there is no real standardization within the industry, their manufacture has more or less naturally adapted to the standard sizes offered on the plywood market. Choose the "**Repertory Panel**", a standardized decorative panel that can be stored and reused in a wide range of sectors. **For more information** on homogenizing stage flats, the choice of wood, fasteners, the best products for textures, etc., **please refer to the specialized information sheet available on the [Film Paris Region website](#).**



Vertical stand

Rent your stands (goat, strut, bracket, etc.) or make them yourself using a folding system that is reusable and easy to store in a film studio. This will save a large amount of wood.

Innovative materials

- Viva Hard de Vivaluz: an eco-friendly composite made from 50% recycled textile fibers and manufactured in France. It can be used as an alternative to wood as a support instead of CP for stage flats.
(<https://www.vivaluz.fr/produit/materiau-composite-recycle/>).
- Honeycomb cardboard, the IPAC range (<https://ipac.pro/>).



Where can I rent stage flats?

- Arlequin Matériaux (94)
- Artstock(92)
- La Réserve des Arts (93)
- La Ressourcerie du Cinéma (93)
- Les 3 Portes(27)

It is worth noting that **more and more studios are now considering rebuilding their stocks of stage flats** so that they can rent them directly to productions on site.

Phase 2: The production design sheet

Although it is ideal to use existing stage flats, it is often necessary to build certain additional modules. In this case, it is best to pay particular attention to the raw materials used and, whenever possible, choose those with eco-friendly labels.

Labels

The **NF Environment, European Ecolabel, Sustainable Certification, and Natureplus labels** guarantee that products have a reduced impact on the planet throughout their life cycle and comply with safety standards that help **reduce health risks**.

Choose local wood from known sources, or wood certified by the **FSC** (Forest Stewardship Council), **PEFC** (Program for the Endorsement of Forest Certification Schemes), or **TFT** (Tropical Forest Trust), which **guarantee good forest management practices and traceability**. Avoid toxic materials as much as possible, such as composite wood panels that contain resorcinol. Ask the supplier for panels treated with formaldehyde-free adhesives.

For carpets, seats, and adhesives: **CRI green and green plus.**

For insulation materials: **ACERMI**



Phase 3: Dismantling and sorting sets

What to do with sets after the final clap?

As previously mentioned, **dismantling is a step that must be anticipated during the preparation phase so that it can be included in the budget and also to facilitate logistics.**

Hence the importance of carpenters, and also of the head painter who will have anticipated this phase (see painting sheet 04).

In a production design quote, the following must be taken into account:

- The various **bins needed to sort the different waste streams**. **Note**, the more waste there is, the higher the cost, so limiting waste can be a way for productions to save money on their budget.
- **Dismantling by the builders**
- If necessary, call on a **specialized service provider** such as *Fin de déchets*, which offers comprehensive collection and recycling services tailored to the needs of professionals in the film and audiovisual sector.



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Reminder of the Environmental Code

Manufacturers are responsible for the waste they produce: : Art. L514-2 of the French Environmental Code-Légifrance. The **AGEC Law** against waste and for the circular economy, passed in 2020, reinforces companies' responsibility for managing their waste.

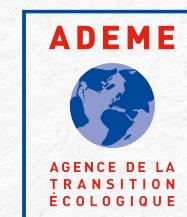
The law on sorting **five types of waste**, introduced in 2016 by [Decree No. 2016-288](#), **requires companies to sort at the source and collect five types of waste separately: Paper/cardboard, metal, plastic, glass, and wood, plus textile waste since January 1, 2025** (sorting of six waste streams).

In addition, sorting also makes it possible to identify raw materials that should not be thrown away because they can be reused for other sets.

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