



## Recycling stations and opportunities for reuse of used mattresses

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# RECYCLING STATIONS AND OPPORTUNITIES FOR REUSE OF USED MATTRESSES

Fieldwork at six recycling stations involving interviews with staff and citizens regarding experiences with disposal and potential reuse of used mattresses

**Keywords:** Recycling station, sharing zone, direct reuse, user behaviour, mattress recycling

## SUMMARY

Through qualitative interviews, observations, and photos, possibilities for direct reuse have been investigated at 6 different recycling stations. Employees at the stations reports that many mattresses are received, and their condition can be good, but the infrastructure (the physical space targeted for direct reuse) is challenged at several locations. Some stations employ recycling spotters who seem to be valued by citizens and contribute to increased direct reuse. Some citizens appear eager to dispose their used mattresses, some almost ashamed. Strong emotions toward very personal items are not uncommon but may hinder potential reuse. The emotional aspect will be further pursued in the project's focus on recycling.

## BACKGROUND

This note is part of the project Mattresses - Reuse and Recycle Systems, M-RRS, and describes the progress of selected recycling stations regarding the implementation of direct reuse. It does so with a specific focus on mattresses to examine whether/how many mattresses are currently directly reused at the recycling stations and if there is potential for scaling this practice. Direct reuse is intriguing as it represents the most sustainable waste treatment by prolonging the lifespan of items.

During the fieldwork, DTU Sustain has been in contact with ARC, a partner in M-RRS, and they have facilitated contact with the recycling stations and assisted in arranging the visits. Six recycling stations were visited during the fieldwork: Farum Recycling Station (Vestforbrænding), Kirstinehøj, Vermlandsgade, Kulbanevej, Bispebuen, and Sydhavn Recycling Stations (all 5 under ARC).

In this note, we have prioritized data from Kirstinehøj, Vermlandsgade, Farum, and Sydhavn Recycling Stations, as these provided the most interesting insights into the handling of direct reuse and the management of mattresses at these locations.

## KIRSTINEHØJ RECYCLING STATION

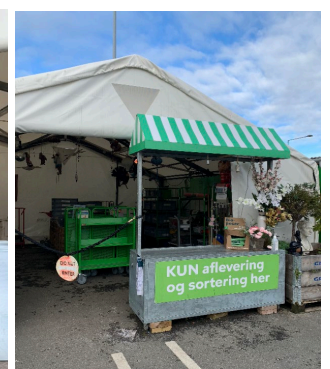
Kirstinehøj recycling station is located in Kastrup and is the ARC recycling station that receives the most waste and the highest number of visitors (1). The recycling station has a direct reuse agreement with the Røde Kors. Røde kors has a permanently stationed container on-site. The container specifies that mattresses should not be deposited, but after conversation with an employee from Røde Kors at the site, it was revealed that citizens still place mattresses in the container. The employee mentioned that the mattresses are kept dry inside the container, but often, they are in a condition that cannot be resold. However, on occasion, they take some of the mattresses and sell them in their stores.



Røde Kors bil vehicle and container at Kirstinehøj Recycling Station.

## VERMLANDSGADE RECYCLING STATION

Vermlandsgade Recycling Station is located in Copenhagen S and features a large sharing zone in an attempt to increase reuse and recycling while phasing out small combustibles (Småt brændbart) (1). At the site, a reuse spotter is employed to guide citizens on what should be reused and to identify items from the containers for the sharing/reuse zone. In the reuse zone, a tent has been set up for furniture, where mattresses are also placed. The tents are not an optimal solution, as furniture and mattresses become damp when they are left there for too long. After this, the mattresses and other upholstered furniture are disposed of in the "upholstered furniture" container. Originally, there was a container for the furniture, but this resulted in poor working conditions for the site staff when it had to be emptied, due to a high edge that the machinery could not pass. The recycling center places emphasis on creating a pleasant atmosphere, which was clearly noticeable during the visit, as the site was decorated and music was played in a designated area.



TL: Tent for storing furniture in the sharing zone. TR: Drop-off area in the sharing zone.

## FARUM RECYCLING STATION

At Farum Recycling Station in Furesø Municipality, there is no sharing or reuse zone apart from a small table by the office building. They have an agreement with the scouts, who have a receiving area next to the site. The scouts do not accept mattresses, but occasionally citizens still leave mattresses with them, and these are then moved directly to the recycling station. All mattresses must be placed in the container for upholstered furniture. Next to this container is an area where citizens leave their items since the container is not accessible to them. When the area is full, an employee moves the items into the container using a digger. An employee at the site stated: "The quality of the mattresses being deposited is generally surprisingly good" but added that the mattresses get damaged when moved by the digger. The physical setup of the recycling station does not allow for direct reuse due to lack of space and the way items are handled when being moved. There's also the question of market demand. The employee mentioned that he personally wouldn't take a used (but decent) mattress: "It's a bit different with mattresses." During our field visit, a man deposited mattresses from an estate. He was briefly interviewed about the mattresses and seemed somewhat uncomfortable with the situation. He found the condition of his mattress "embarrassing" and therefore positioned it in a way that the stains couldn't be seen. This observation aligns with our experiences from fieldwork in second-hand stores (Research brief 6), where we also noted discomfort among customers regarding stains on mattresses and uncertainty about the causes.



Area and container for upholstered furniture at Farum recycling station. On the left, citizens place the furniture, and employees move them with a digger to the container on the right.

## SYDHAVN GENBRUGSPLADS

Sydhavn Recycling Center is located in Copenhagen SV and is the recycling center with the largest direct reuse area, which also aims to phase out "Small Combustibles" (Småt brændbart) (1). The site is designed so that citizens pass through a gateway where the reuse spotters are stationed. The spotters help citizens sort out items before they continue further into the site, so that, as far as possible, they avoid having to go around all the containers to retrieve items with reuse value. In the reuse area, there are both indoor and outdoor covered areas for storing the items delivered by citizens. Upholstered furniture and mattresses can therefore be stored indoors, preventing them from becoming damp. The reuse spotters experienced that the amount of waste had decreased after the introduction of the reuse area, indicating that the initiative appears to be working as intended.



Indoor recycling area at Sydhavn recycling station

However, the recycling spotter mentioned that ordinary citizens haven't fully embraced the recycling area yet, and it's primarily '*professionals who resell items*' and entrepreneurs who utilize the area.

Out of all ARC's recycling stations, Sydhavn recycling station only accounts for 4% of the visitors (1). The extensive recycling area holds significant potential that isn't fully utilized yet. Subsequently, we observed that ARC has started advertising the recycling area on Instagram, where an influencer talks about the site.

As the only one among the visited recycling stations, the recycling area had a workshop designated for entrepreneurs. However, the area is currently being rethought. Currently, permission is required to use the workshop. Recycling spotters assist entrepreneurs in finding materials from containers and the direct recycling area for their needs/products.

## KEY FINDINGS

As expected, we found numerous initiatives implemented at the recycling stations, with some solutions for direct reuse being more successful than others. Particularly, Vermlandsgade recycling station stood out. The size and organization of their recycling zone appeared highly successful, and the positive atmosphere at this location distinguished it from the other recycling stations. More direct reuse seems to lead to a reduction in small combustibles and consequently reduces waste volume. However, direct reuse requires ample space, which poses a challenge for many recycling stations. Additionally, it demands extra manpower and adds more tasks to the employees' workload. Lastly, we want to emphasize the varying conditions of the mattresses deposited at the recycling stations. Some mattresses appear nearly new and could be directly reused, while others lack potential. Furthermore, there's a need to rethink the stations, so that mattresses and other items with potential for direct reuse (or recycling) are handled in a manner that prevents damage, as is currently happening in some instances when the site employees have to move them.

## Authors

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## Literature

(1) <https://a-r-c.dk/app/uploads/2021/03/Aarsredegørelse-2020.pdf>

## Partners in the project

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