

# Flatpack : Repacked

RESEARCH PROJECT SUMMARY



## Acknowledgement of Country

RMIT PlaceLab acknowledges the people of the Woi wurrung and Boon wurrung language groups of the Eastern Kulin Nations on whose unceded lands we conduct the business of the University.

RMIT PlaceLab respectfully acknowledges their Ancestors and Elders, past and present, as the original and continuing Makers of Place.

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Version 1.0

## RMIT PlaceLab Initiative

### RMIT PlaceLab is an urban initiative connecting community, shaping place and taking a radically different approach to doing research.

Designed to free research from the campus and bring researchers street-side to connect with local government and groups, RMIT PlaceLab facilitates site-based research to support the co-creation of new ideas, partnerships, and systems that grow positive community impact.

Dynamic, actionable and accessible, RMIT PlaceLab Research Projects are bite-size and community-engaged, generating insights, ideas and solutions that can be implemented together with our government and place-making partners.

### Flatpack: Repacked Research Project

#### Long Story Short

RMIT PlaceLab's **Flatpack: Repacked** Research Project examined the behaviours and motivations of City of Melbourne residents regarding the acquisition, maintenance, and disposal of furniture.

#### What We Explored

We explored these behaviours and motivations through a circular economy lens to identify current strengths in the circulation of furniture items and materials in the City of Melbourne, and to identify potential areas of improvement and provide relevant insights and reflections.

Through an online survey, interviews and a field study of hard rubbish, we engaged with a range of community members to document consumer behaviours and perspectives, and quantify the issue of hard rubbish. We also explored the potential for discarded furniture to have a second life by engaging RMIT students to repair furniture items collected from hard rubbish, and showcased the outcome of these during a Floor Talk with the City of Melbourne.

In the City of Melbourne (CoM), the disposal of furniture and large household items in hard rubbish surged from 230 tonnes in 2009-10 to 940 tonnes in 2016-17 (City of Melbourne, n.d). A trend towards 'fast furniture' has seen an increase in short-lived furniture items ending up in hard rubbish (Cummins, 2020). This is due to the increasing use of lower quality materials and designs by manufacturers (European Environmental Bureau, 2017).



Figure 1. City of Melbourne 'Waste Resource Chart'.

In response to the rising challenge of hard rubbish waste and broader waste disposal concerns, the City of Melbourne has laid out its 'Waste and Resource Recovery Strategy 2030' (City of Melbourne, 2019). This strategy aims to guide the municipality toward a circular economy that prioritises "reuse, recycling, and recovery," with the ambitious goal of diverting 90% of waste from landfill by the year 2030.

**“ A Circular Economy is an economic system designed to increase the sustainability of products and materials by minimising resource consumption and waste.**

Unlike a traditional linear economy that follows a 'take, make, dispose' approach to products, a circular economy aims to close the loop of life cycles by encouraging the continuous use, recycling, and regeneration of materials.

There are numerous circular economy frameworks with interventions that aim to close the loops at different stages of a product or material's lifecycle. Some of these interventions are focused on consumers, some on producers, while others are for both. The original 3R model of *Reuse, Recycle, and Recover* as featured in the City of Melbourne's Waste and Resource Recovery Strategy 2030 is commonly applied to waste strategies by governments.

The interventions of Recycle and Recover have not been considered in this Project as data is not currently available on the Recycling of materials disposed in hard rubbish for the City of Melbourne, and Recover is an intervention undertaken by manufacturers, not consumers. These have been



replaced by the more relevant interventions of **Refuse and Repair** for this study.

Economics involves understanding how individuals utilise resources and make decisions related to those resources. Consequently, to assess the implementation of the Circular Economy system for furniture in the City of Melbourne, it is essential to initially understand the behaviours and decision-making processes of residents concerning the entire lifecycle of furniture, including acquisition, maintenance (or usage), and disposal.



Figure 2. Field Study image of hard furniture waste in Carlton, Melbourne. Image: RMIT PlaceLab

### 3 Methods

We chose the following methods and engagement activities as part of the **Flatpack: Repacked** Research Project to examine the behaviours of furniture consumers in the City of Melbourne:

- **Online Survey**
- **Interviews**
- **Hard Rubbish Field Study**
- **Student Furniture Repair and Auction**
- **Floor Talk**
- **Exhibition**

#### 3.1 Research Methods

Our primary research activities listed below occurred over three months: July, August, and September 2023.

##### 3.1.1 Online Survey

An online survey was hosted throughout July and August. Largely multiple choice, the survey asked respondents about their experiences and motivations when acquiring, maintaining, and disposing of furniture.

A total of 393 participants undertook the survey, with 115 participants being City of Melbourne residents. The remaining 278 participants were based in 33 other Victorian Local Government Areas (LGAs).

*The remainder of this report refers only to the City of Melbourne residents.*

##### 3.1.2 Interviews

To examine the experiences and motivations of City of Melbourne residents in further detail, we recruited 13 interview participants from the online survey sample for further in-depth discussion.

##### 3.1.3 Hard Rubbish Field Study

Carlton was chosen as the focus area within the City of Melbourne.



Figure 3. Field Study image of hard furniture waste in Carlton, Melbourne. Image: RMIT PlaceLab



Four field surveys were undertaken by our PlaceLab team which involved walking the area of Carlton, Victoria, and collecting data on hard rubbish collection days. This involved recording the number of furniture items left out on the street, the types of materials that they were made of, and the volume of each hard rubbish pile that the furniture was found in.

Activity also included taking specific measurements of the furniture and piles, and photographing these pieces and piles as part of our documentation.

Across the four field study days, 34 piles of hard rubbish were found, containing 73 furniture items with a combined volume of 100.2 m3.

### 3.2 Research Data Analysis

The data gathered from each activity was analysed individually before overarching themes were identified across the 'Flatpack: Repacked' Research Project.

- **Online Research Surveys:** Quantitative survey data was analysed using Qualtrics. Qualitative survey data was coded manually and analysed thematically using Microsoft Excel.
- **Interviews:** Individual conversations were audio recorded, with the consent of the participants, and were transcribed by the PlaceLab team. Transcripts were analysed thematically, with final themes emerging iteratively.
- **Hard Rubbish Field Study:** Quantitative data including the quantity, volume and dimension of hard rubbish was taken at each pile, supported by photographs taken by the PlaceLab team.

### 3.3 Community and Student Engagement

To engage the local community in this Project and the emerging findings, we developed three participatory activities listed below that complemented the research.

#### 3.3.1 Student Furniture Repair and Auction

A total of four furniture items with various damages (e.g. rust, water damage, etc.) were collected from the hard rubbish piles in Carlton during the Hard Rubbish Field Study.

We engaged with academics and students from the College of Vocational Education's Furniture Design discipline to collaborate on the repair of these collected items. The student team of furniture designers recorded the cost, process, and labour times involved in repairing each of the items.

These repaired pieces were then exhibited to the public during the **Flatpack: Repacked** Exhibition. Visitors were invited to express their interest to go in the draw to 'rehome' their favourite restored furniture item, serving as a further measure of the public's interest in repaired second-hand furniture.

#### 3.3.2 Floor Talk

We held the **Flatpack: Repacked** Floor Talk to present the findings of the Project including suitable strategies for addressing the problem of hard rubbish furniture in the City of Melbourne.

It was an opportunity for the members of the City of Melbourne Circular Economy team to join us in a discussion of practical aspirations and goals of the City around this topic. Local community members as well as other interested stakeholders were invited to partake in this conversation.

#### 3.3.3 Exhibition

As part of RMIT PlaceLab's Cycle 02 Research Projects wrap up, from 7th to 20th December 2023 we presented the RMIT PlaceLab Melbourne Exhibition, showcasing outputs for our two Melbourne-based Research Projects.

Visitors from across community, local council, industry, local media and RMIT discovered how we explored the issue of hard rubbish in the city. The **Flatpack: Repacked** Exhibition comprised of printed information panels about the Research Project, a furniture display showcasing the repaired furniture items along with panel descriptions of their associated repair costs, a slide show of the hard rubbish documented during the Hard Rubbish Field Study and our Flatpack: Repacked Zine for the community to take and share.



Figure 4. Flatpack: Repacked Exhibition Panels. Image: Suzanne Phoenix



Figure 5. Repaired furniture on display in Exhibition. Image: Suzanne Phoenix

## 4 Findings

The findings from our Project activity can be divided into three key **behavioural** areas; **Acquire, Maintain, Dispose** and into three key **intervention** areas; **Refuse, Reuse, Repair**.

To view the full set of graphs and results for this project, please view our [Zine Report](#), linked on the **Flatpack: Repacked** project page on the PlaceLab website ([www.placelab.rmit.edu.au](http://www.placelab.rmit.edu.au)).

### 4.1 Behavioural Areas

#### Acquire

- 62% of participants would prefer a new dwelling to be unfurnished.



Figure 6. Survey results on 'Preference for New Dwelling'.

- Cost is the most common priority when acquiring furniture; closely followed by style/appearance, comfort, durability/longevity, and functionality.
- 66% of participants had acquired at least one item of furniture new, while 62% had acquired furniture by a second-hand purchase.
- The acquisition of second-hand furniture can be motivated by factors other than cost, including recognising an item's value once repaired, and a desire for styles and materials that are not readily available from contemporary furniture retail outlets.

#### Maintain

- Functionality was the predominant consideration once an item entered participants' lives.
- 84% of participants were dissatisfied with at least one item of furniture, with durability issues being the leading cause of dissatisfaction.
- 41% of participants had repaired at least one item of furniture, with 49% indicating that they have not repaired furniture but would if required.

#### Dispose

- 82% of participants had previously disposed of furniture, with 65% using hard rubbish collection and 55% selling online.
- Many interview participants indicated that hard rubbish disposal was their last resort for disposing items.
- Convenience was the most common reason for choosing a particular method of disposal, followed by sustainability.
- 92% of participants obtained information on how to dispose of furniture from their family or friends, compared to 64% who used City of Melbourne information sources.

## 4.2 Intervention Areas

### Refuse

- During significant life transitions, such as relocating to a new place, individuals often find themselves more willing to acquire items that they would typically refuse under normal circumstances. As such, it's not uncommon for someone to purchase or invest in things they may not have considered before the life change took place.
- Interview participants frequently identified their sofa as their least preferred piece of furniture, saying it was underutilised and a wasteful investment considering its cost and size.

### Reuse

- This is the predominant Circular Economy intervention. 68.7% of respondents have acquired at least one item through Reuse, and 90.4% of respondents who have disposed of at least one furniture item reported using Reuse practices.

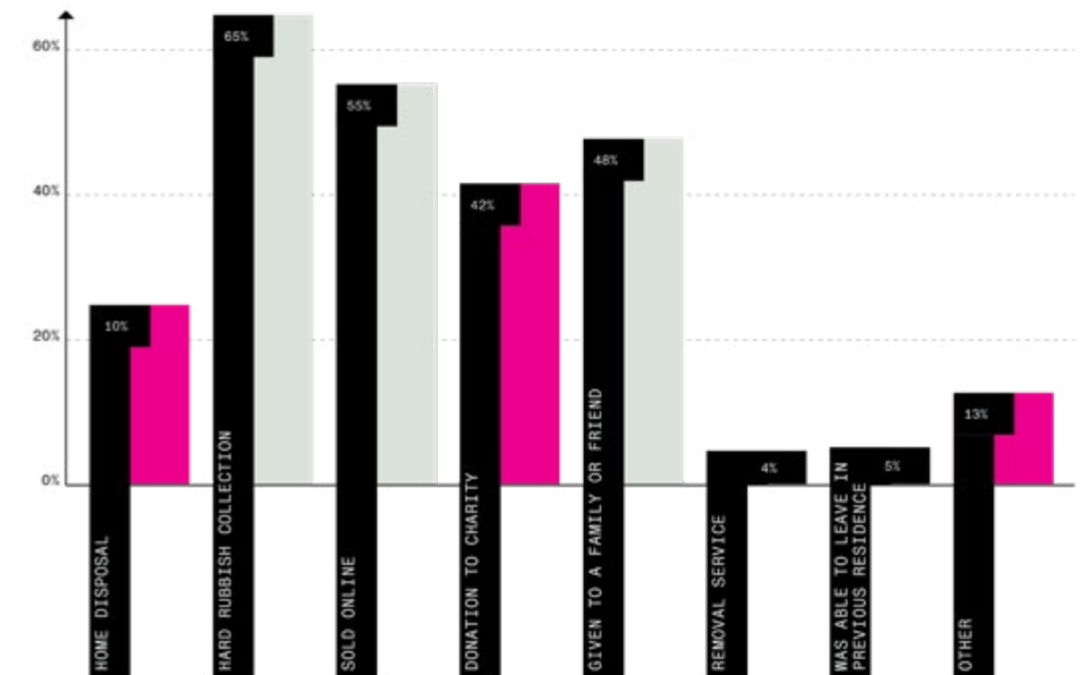


Figure 7. Survey results on 'How it was Disposed'.

- Difficulty in the transportation of second-hand items was a commonly reported challenge.
- Many interview participants expressed difficulty in understanding the conditions of items they were interested in acquiring from hard rubbish which reduced the likelihood of them bringing it home.

### Repair

- Existing knowledge was the most common source of information on how to repair the furniture (76.6%), with only 8.7% reporting assistance from a tool library or community service.
- Some participants reported not having the skills or tools available to repair furniture which meant they were hesitant to undertake this intervention of repair.



## 5 Reflections

The '**Flatpack: Repacked**' Project highlighted a population that is engaged and interested in sustainable practices and minimising waste.

Those we engaged with demonstrated a range of skill-sets and attachments to their furniture, with some viewing it not only as a functional necessity but also as a form of self-expression. Although residents express good intentions in minimising furniture waste, they believe they would significantly gain from the implementation of additional systems, mechanisms and infrastructure for reusing and disposing of furniture.

Under the headers from our 'Intervention Areas' of *Refuse*, *Reuse* and *Repair* the below are some suggestions that may form those additional systems for reusing and disposing of furniture.

### Refuse

- Newcomers to Melbourne, particularly international or interstate students, could make more informed and practical furniture decisions by delaying purchases and receiving locally created decision trees that could help to better understand their needs and preferences to reduce unnecessary furniture expenses.

### Reuse

- To boost the adoption of second-hand furniture, online platforms like 'Facebook Marketplace' could enhance their services by introducing a delivery option for used items, possibly in conjunction with an existing delivery service such as Uber.
- To assist the community in better knowing the condition of the furniture items in hard rubbish, a sticker system could be introduced where those putting out hard rubbish items could indicate the state of the items e.g still functional, needs simple repairs or not fixable.
- To create an affordable and centrally located thrift store, a well-known and trusted second hand furniture store could be supported by the City of Melbourne in an existing council property to ease the start-up and rental costs involved to the business.

### Repair

- To boost the awareness of the existing City of Melbourne makerspaces that already offer workshops and tool libraries targeted social media campaigns alongside partnered events with universities, local community groups and student housing providers could increase awareness and interest in repair.

## 5.1 Afterword

Our Project activities suggests that there is sufficient support from residents for additional Circular Economy-inspired initiatives, like those in the recommendations, to succeed in closing the furniture loop within the City of Melbourne.

To find out more about our Project and to download a summary of the Project findings, please view our [Zine Report](#), linked on the **Flatpack: Repacked** page on the PlaceLab website.

RMIT PlaceLab proves what is possible when local community knowledge and expertise informs research. Together, we've tackled real-world, urban challenges and sought innovations that look to improve liveability, community resilience and connection.

## Project Acknowledgements

The **Flatpack: Repacked** Research Project was part of RMIT PlaceLab, an RMIT Initiative supported through the Victorian Higher Education State Investment Fund (VHESIF).

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## Ethics

This Research Project has been assessed and approved by the RMIT University College Human Ethics Advisory Network (CHEAN). Ethics Reference Number: 25586.

Research involving human participants is consistent with the guidelines contained in the Australian National statement on ethical conduct in human research and Australian Code for the Responsible Conduct of Research.

## Conflicts of Interest

There are no declared conflicts of interest associated with this Research Project.

## 6 References

- 1 City of Melbourne (n.d.) Internal waste services contract data. Unpublished.
- 2 Cummins, E. (2020) 'Fast furniture is an environmental fiasco', The New Republic, 14 January.
- 3 European Environmental Bureau (2017) Circular Economy Opportunities in the Furniture Sector. Eunomia Research & Consulting Ltd.
- 4 City of Melbourne (2019) Waste and Resource Recovery Strategy 2030.

**We hope this report sparks more important conversations.**

**We'd love to hear your thoughts via:**  
[hello.placelab@rmit.edu.au](mailto:hello.placelab@rmit.edu.au)

**Find out more about the RMIT PlaceLab initiative and our engagement activity, go to:**

[placelab.rmit.edu.au](https://placelab.rmit.edu.au)

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