

# BISHAN PUBLIC LIBRARY

By: Aamirah and Afraah (CHIJ  
SJO)



# Introduction



## Brief Introduction to Bishan Public Library

- The Bishan Public Library is located at 5 Bishan place, opposite the mall Junction 8.
- It serves a large group of people mostly comprising of students from nearby schools and office workers from nearby offices.
- It is easily accessible due to its convenient location, behind a transport interchange

# Why Bishan Public Library, What have we based our proposal on?

- The library serves an estimated number of 90,000 people.
- It is a suitable area for people to be educated on the different aspects of sustainability.
- We have mainly based our research and ideas on the BCA Green Mark scheme and the 3Rs (Reduce, Reuse and Recycle).

# Existing Infrastructures/ Programmes:

- Entrance Shelter
- Carpets
- Pods
  - Rooftop of the Library
  - Blinds in the Library
  - Cooling System of the Library
- Book Donation Shelf
- Cafe
- Programme Zone and Activity Zone



# Eco-Friendly Design

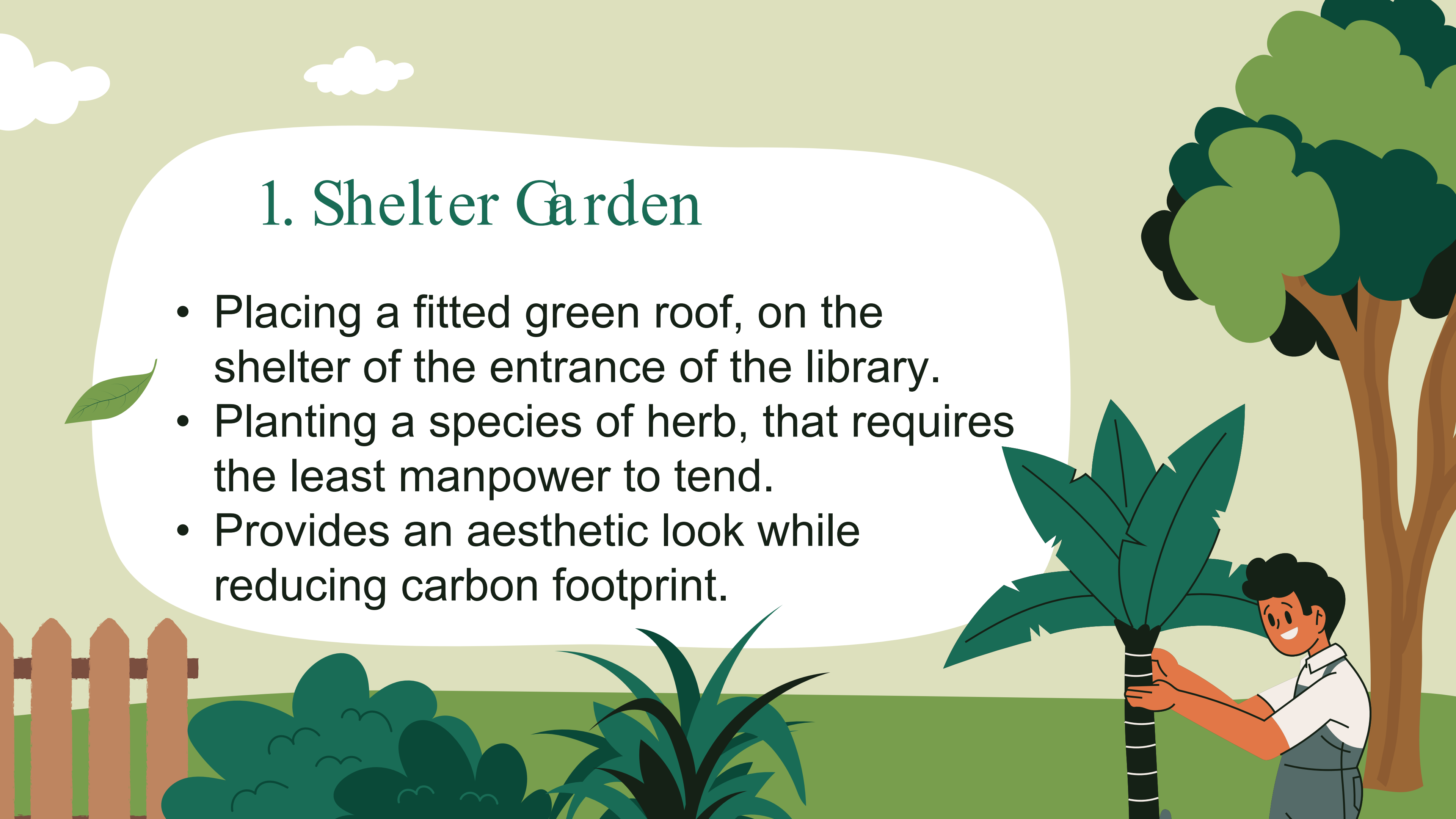
Our Proposed Ideas:

1. Shelter Garden
2. Carpets made of plastic
3. Naturally Ventilated Pods

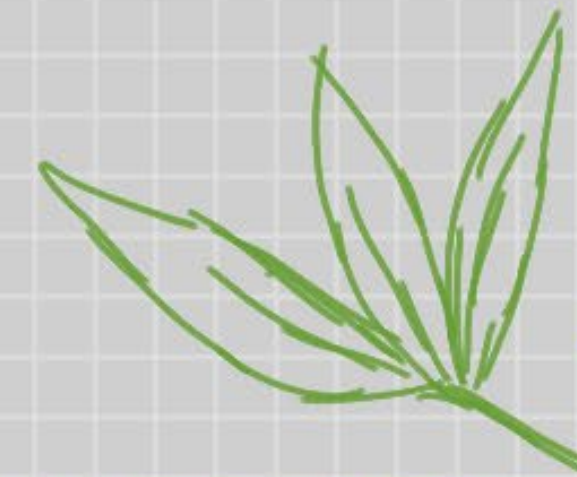


# 1. Shelter Garden

- Placing a fitted green roof, on the shelter of the entrance of the library.
- Planting a species of herb, that requires the least manpower to tend.
- Provides an aesthetic look while reducing carbon footprint.



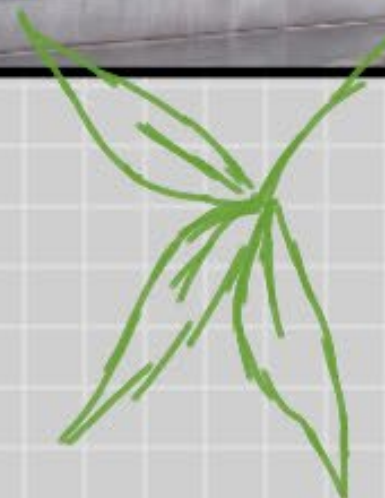
# Reference picture:



Rooftop plants  
above the  
entrance  
(Eco-friendly  
design)



We could have plants to  
be planted on the shelter  
tha covers the entrance  
of the library, like a mini  
garden.



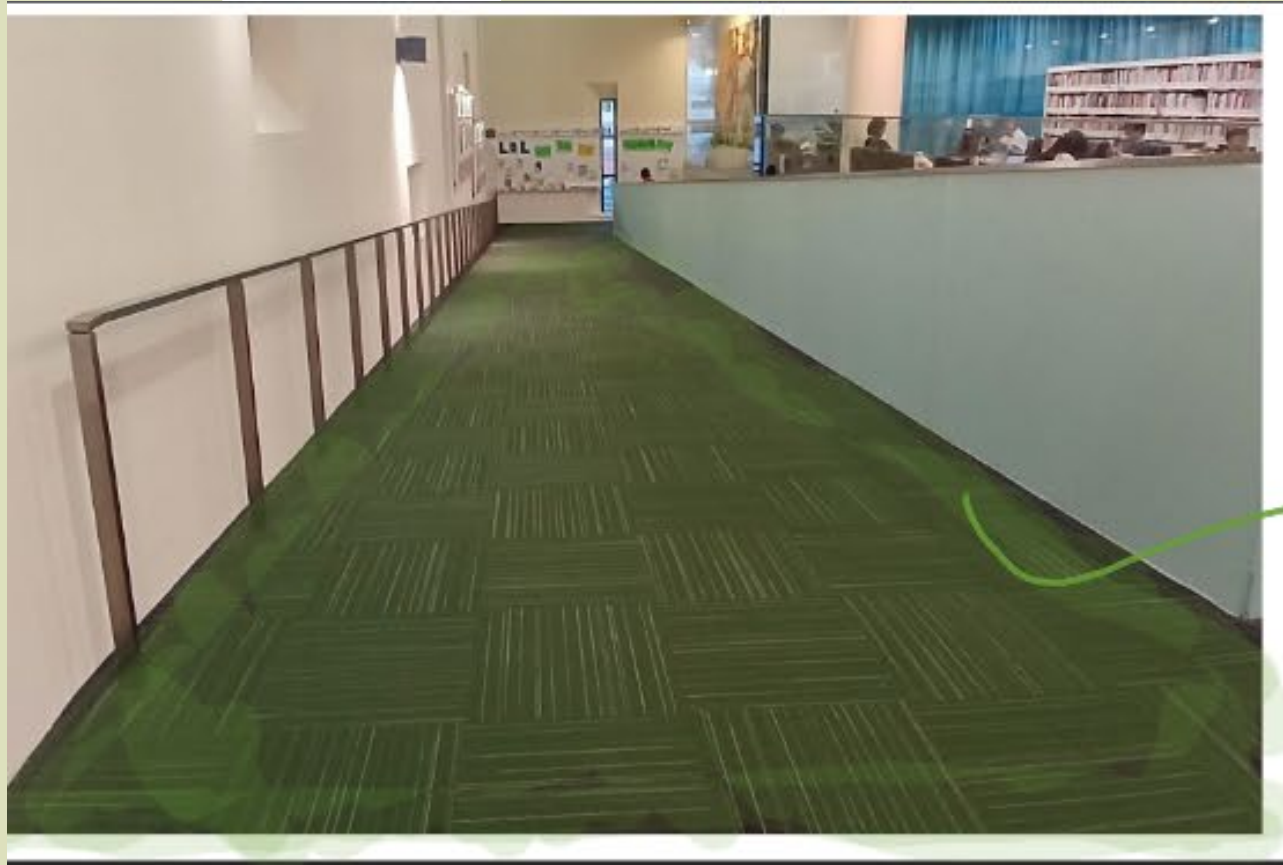
## 2. Carpets made with plastic

- Re-purposing plastic to replace an essential part of the library.
- Reducing the amount of plastic waste affecting the Eco systems around us and reusing it into something useful to the library!



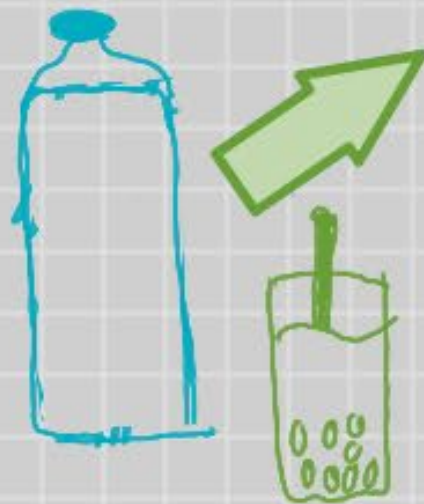


# Reference picture:



They could replace their old carpets with a more sustainable carpet " that are made up of plastic

Carpets made with plastic (Eco-friendly Design)



Carpet made of plastic fibre threads to help to reduce these statistics and plastic waste one at a time



### 3. Naturally Ventilated Pods

- Reducing the amount of energy used by the library.
- By having a naturally ventilated area at each level after level 2 in the library.
- Furnished with a chair for use and potted plants.



# Reference picture:



We could also include a chair to provide users with a place to sit!



We could change these walls into timber facades!



We could also add a few potted plants to make the area a more naturally ventilated place!!

# Energy Efficiency:

## Our Proposed Ideas:

1. Solar panels
2. Smart Curtains
3. Hybrid Cooling System

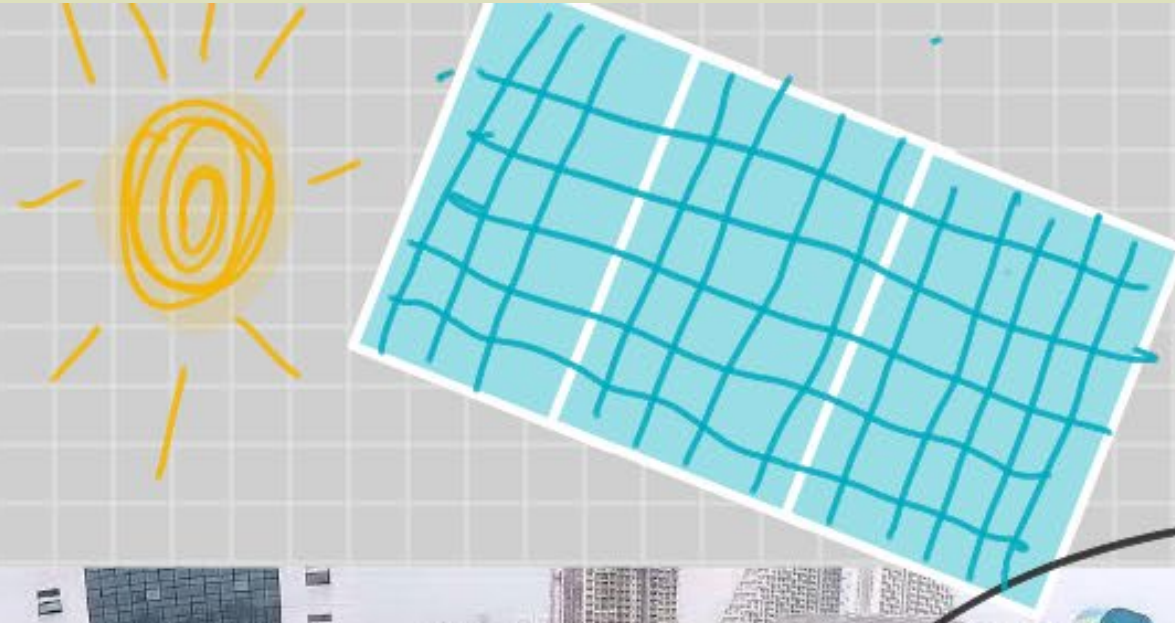


# 1. Solar Panels

- The orientation and location of the library allows lots of sunlight to enter it.
- Solar panels will, be able to harness energy to power the lights and air conditioners. Ultimately, reducing the amount of carbon being emitted.

# Reference picture:

Solar panels  
on the rooftop  
of the library  
(Energy  
Efficiency)



This renewable energy  
could be a way for the  
library to practice  
energy-efficiency



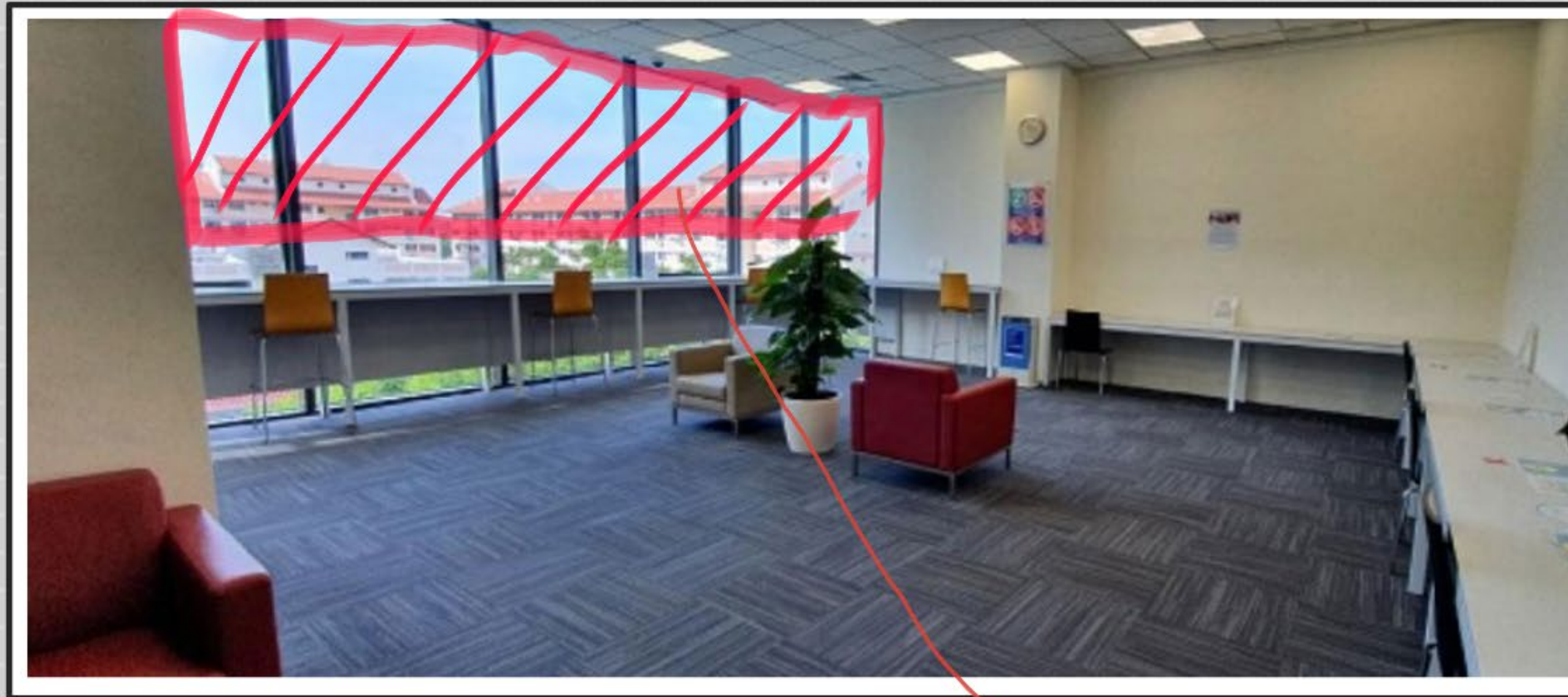
We could add solar panels to the  
rooftop of the library to produce  
renewable energy to power for  
the air-condition that is used  
heavily in the Library and other  
amenities in the building.

## 2. Smart Curtains

- Technology smart curtains that adjust the air conditioning temperatures throughout the day.
- Reduces the need of lowering air conditioning temperatures, making the library use its energy efficiently.



# Reference picture:



Smart Curtain  
Systems @ Level 3  
Singapore  
Collection (Energy  
efficiency)



We could add in the  
smart curtains in  
places that has  
higher exposure to  
the sunlight

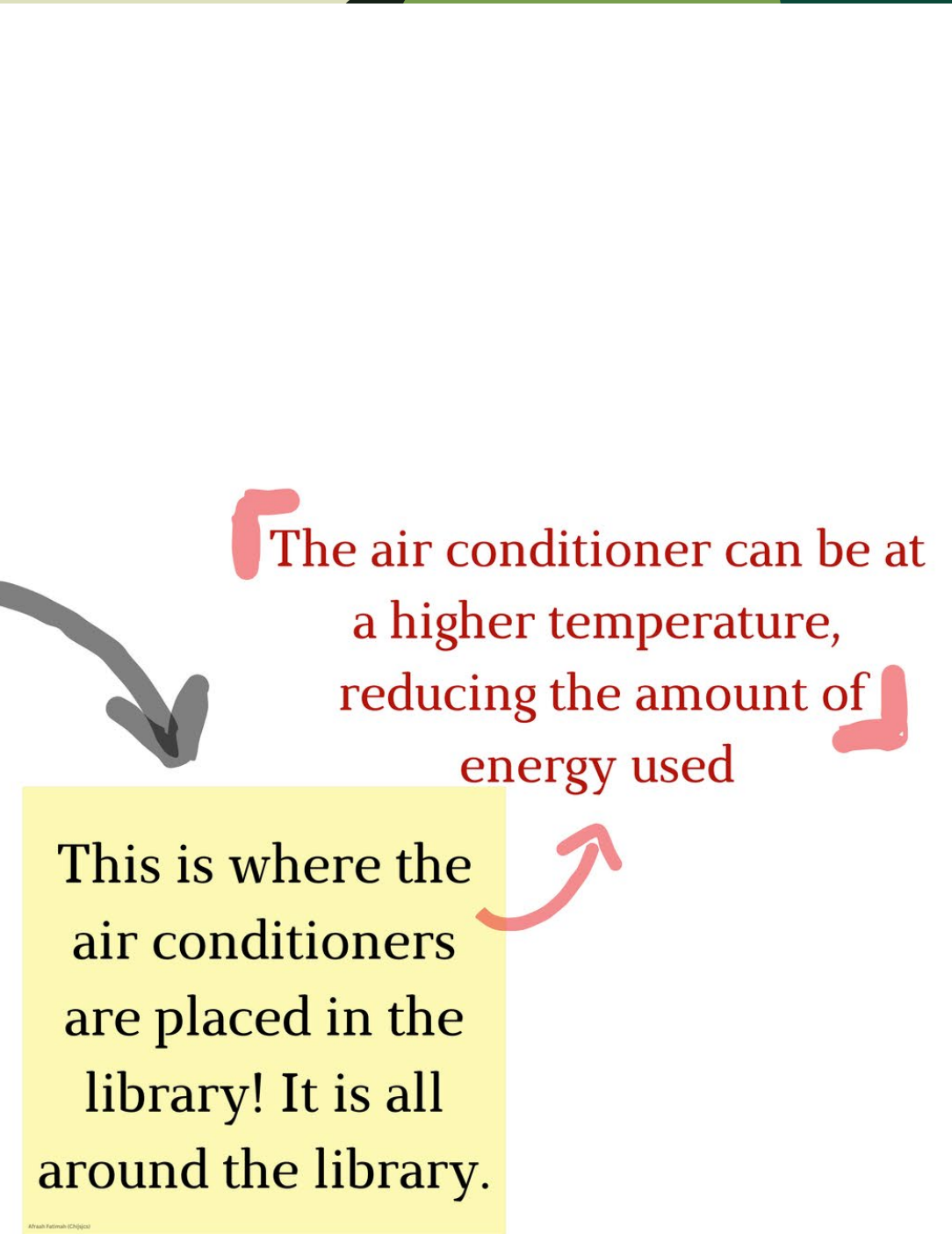
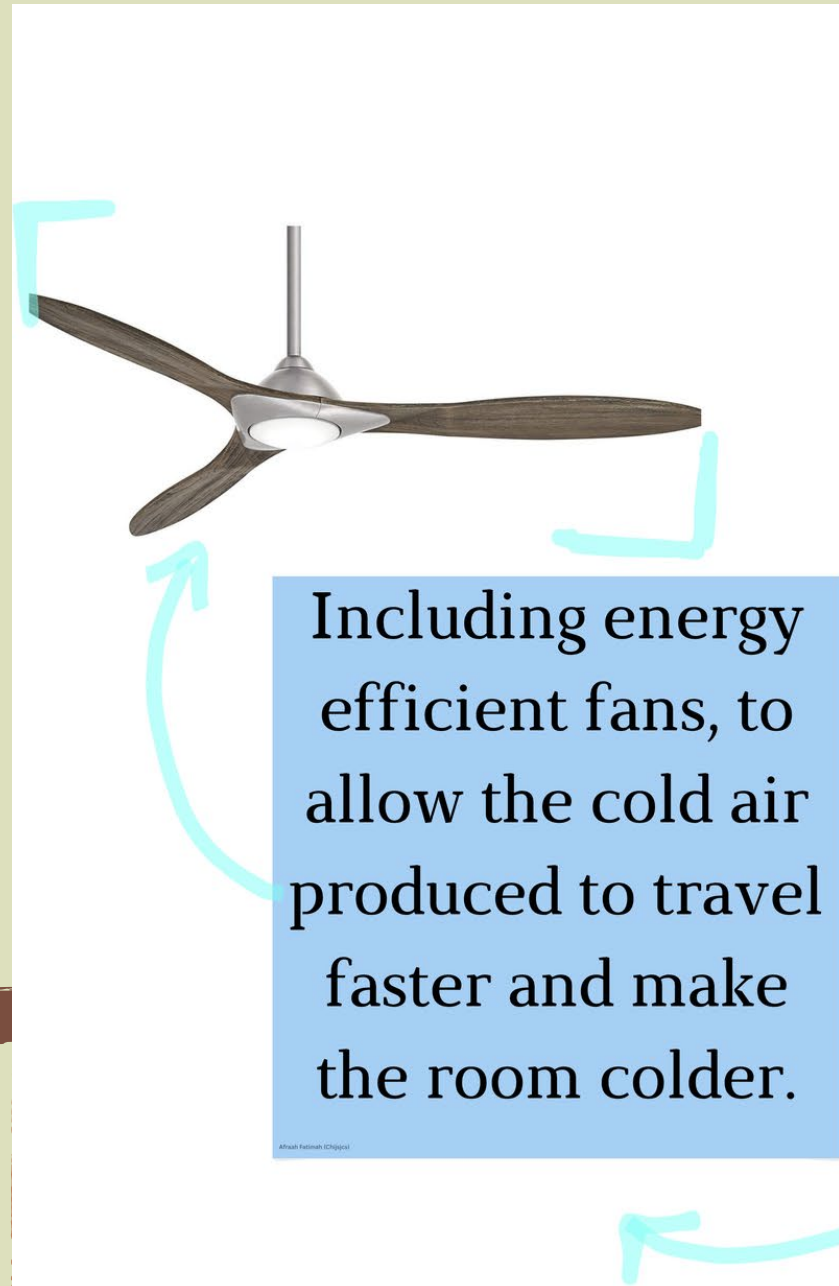




### 3. Hybrid cooling system

- Combining energy efficient fans and low air conditioning settings.
- The new technology of hybrid cooling, will significantly reduce energy used and carbon emitted from the library.
- Making the library more energy efficient.

# Reference picture:



# Waste Management:

## Our Proposed Ideas:

1. Donation Book Bin
2. Upcycling programmes
3. Reusable cup loans

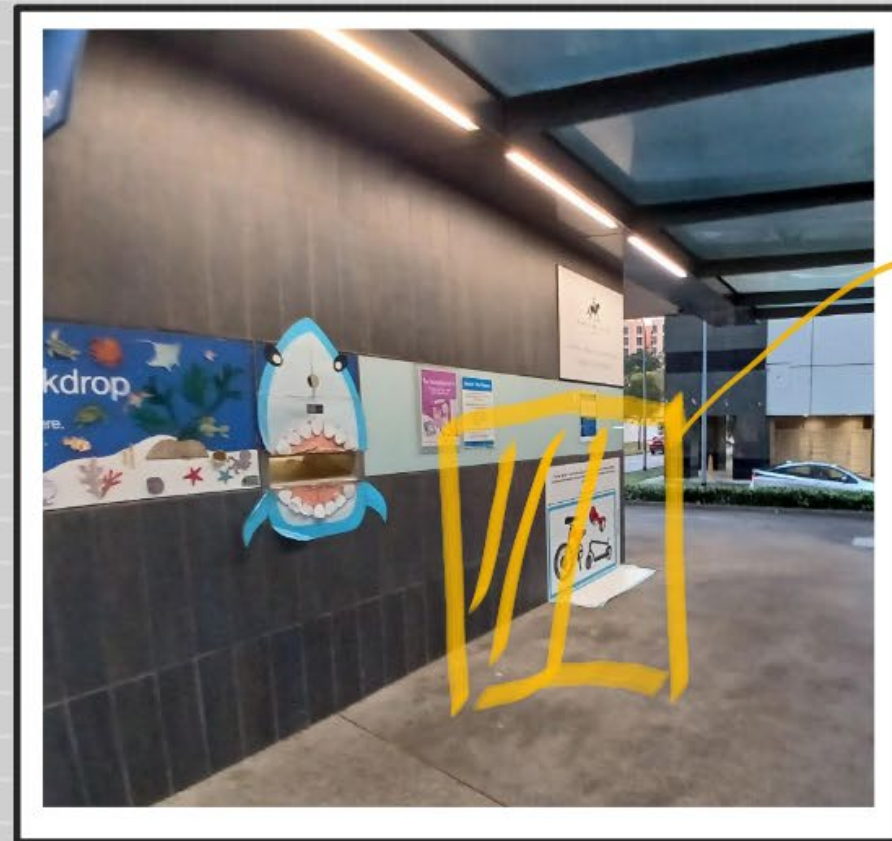




# 1. Donating Books

- Having a noticeable book bin for people to donate their old books that are in good condition.
- Raising awareness of this initiative by having online posters.

# Reference pictures:



We could add a book donation bin near the Bookdrop area to promote the public the habit of recycling books in good conditions.

A NEW LIFE



Library Books  
Waste  
Management)

## PAGES OF POSSIBILITY



### 1. RECYCLE

Want to save the earth?  
RECYCLE SMARTER NOT HARDER! If you have no time to recycle but visit Bishan Library a lot, check out our book bin!



### 2. CRITERIA

Make sure the books are in good condition!

- NOT TORN
- NOT ANNOTATED



### 3. WHERE?

The book bin is located at the area to return books! Do take a look and drop a book!



### 3. Reusable Cup Loans!

- An initiative to reduce the amount of plastic used in the library.
- Customers can loan a cup from the library to bring around the library, instead of purchasing a drink in a plastic cup.
- Manages waste produced by the cafe in the library!



## 2. Upcycling Programmes

- Having programmes with kids to reuse old waste into an artwork or a functional item!
- Using the programme zone to educate people on the 3Rs.



# Reference pictures:



Programmes such as presentations from people actively participating in up-cycling/sustainable living. These can be held at the programme zone.

Programme Zone:  
For Adults



Activity Zone:  
For Kids



EGG CARTONS!!

Kids can engage in activities held by volunteers. Upcycling everyday materials we discard. In the activity zone!



# Conclusion

- These are a few ways to help the library be more sustainable through:
- The energy used
- Its waste management
- And through its building design!



# Thank You

Any Questions?

