

# Fleet Road Terraced Housing

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Jasdeep Multani| Jessica Park

# Architect — Neave Brown



[Link](#)

# Location

Dunboyne Road, London England

Date of Completion: 1967

# Location — Fleet Road Housing



[link](#)



# Location — Fleet Road Housing



[link](#)



# Location — Fleet Road Housing



Belsize Park [underground station](#)



# Location — Floor Plans — 1 Bedroom



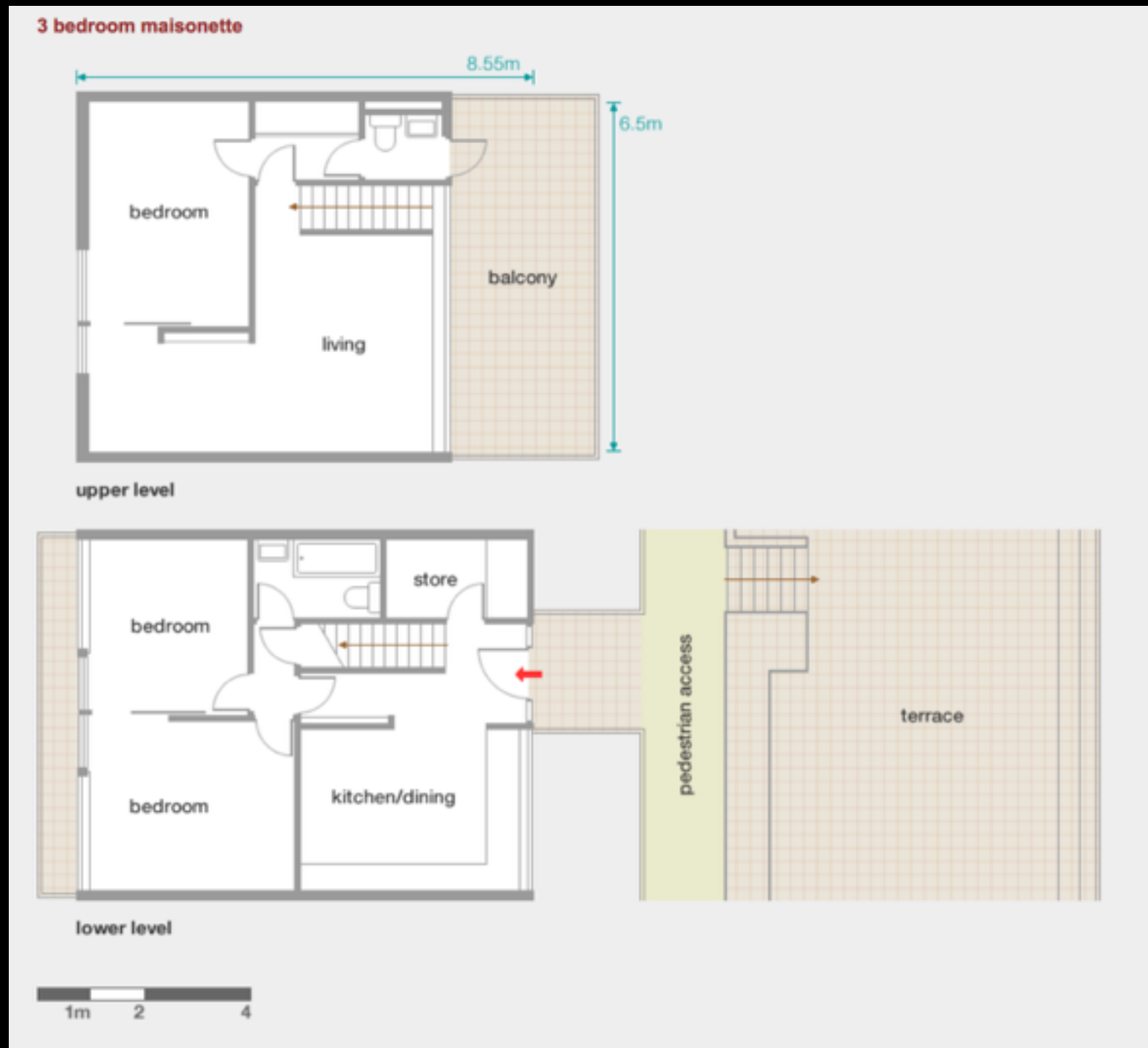
[link](#)

# Location — Floor Plans — 2 Bedroom



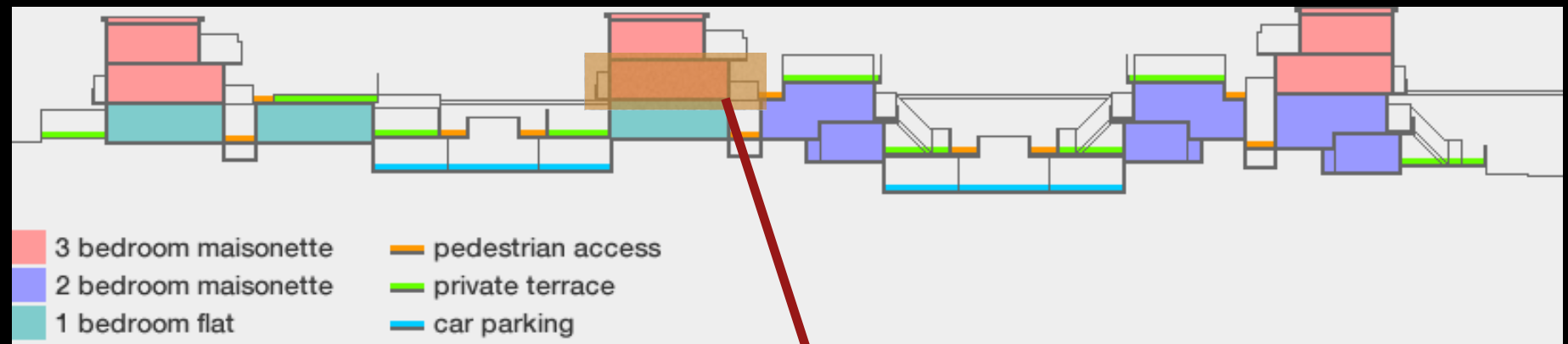
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# Location — Floor Plans — 3 Bedroom





# Terrace

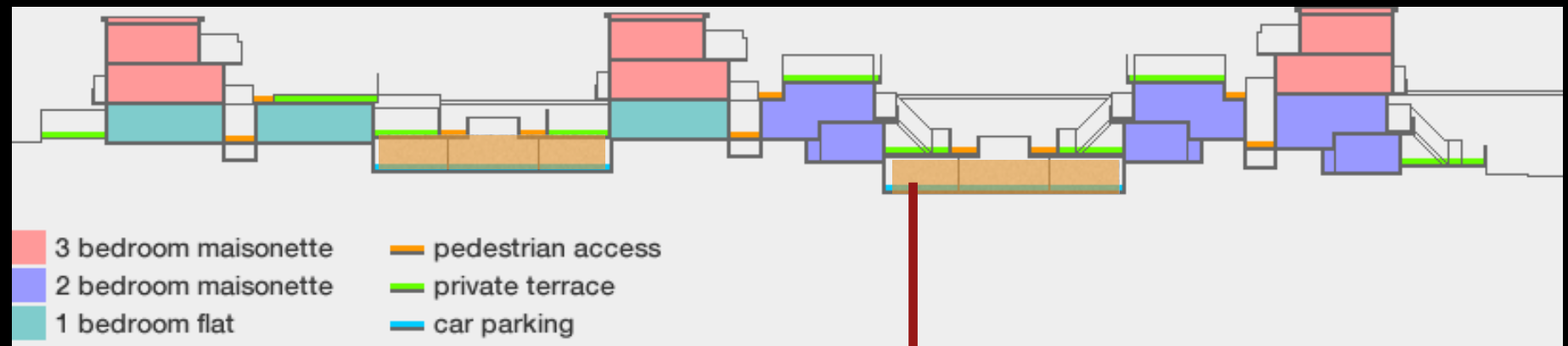


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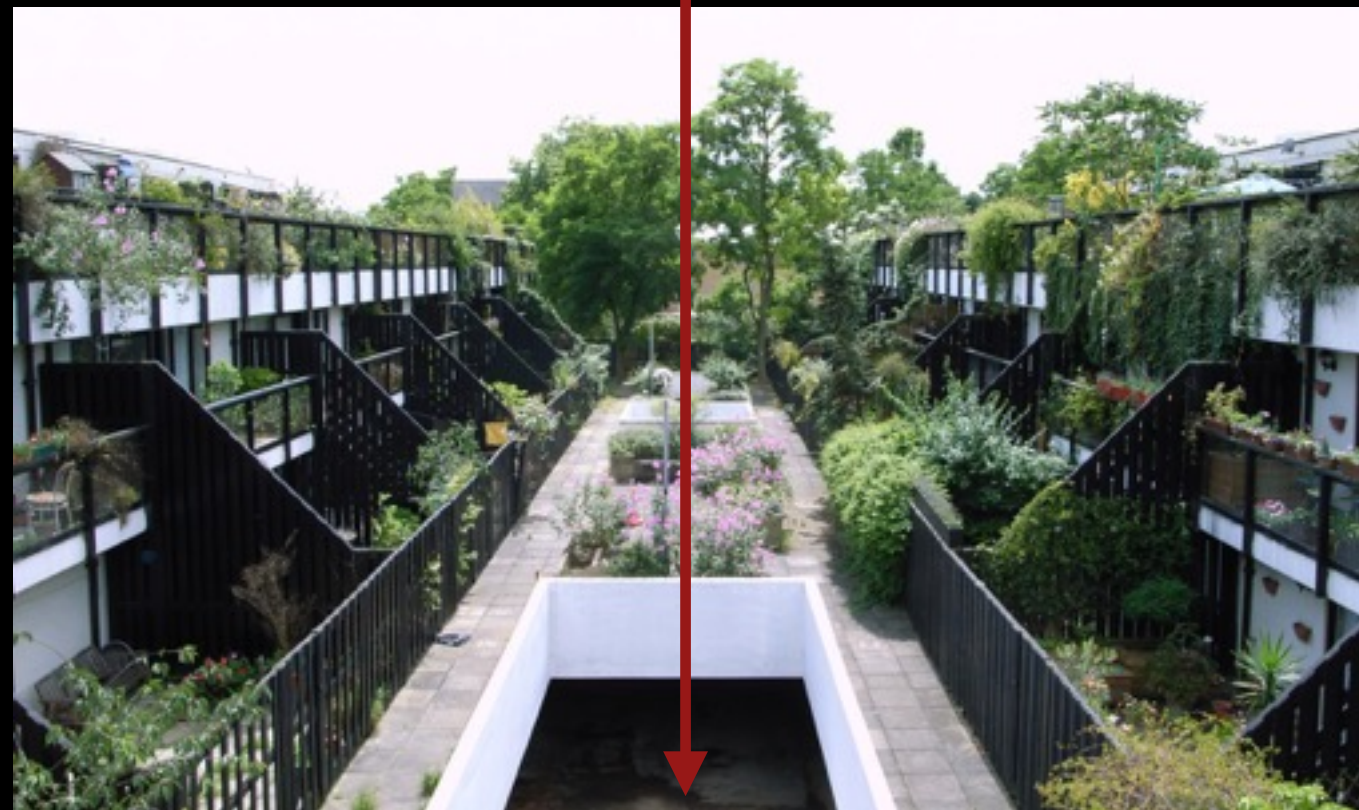
[link](#)

# Parking



[link](#)

Concrete light wells punched through the centre walk way providing light and security for the underground parking.

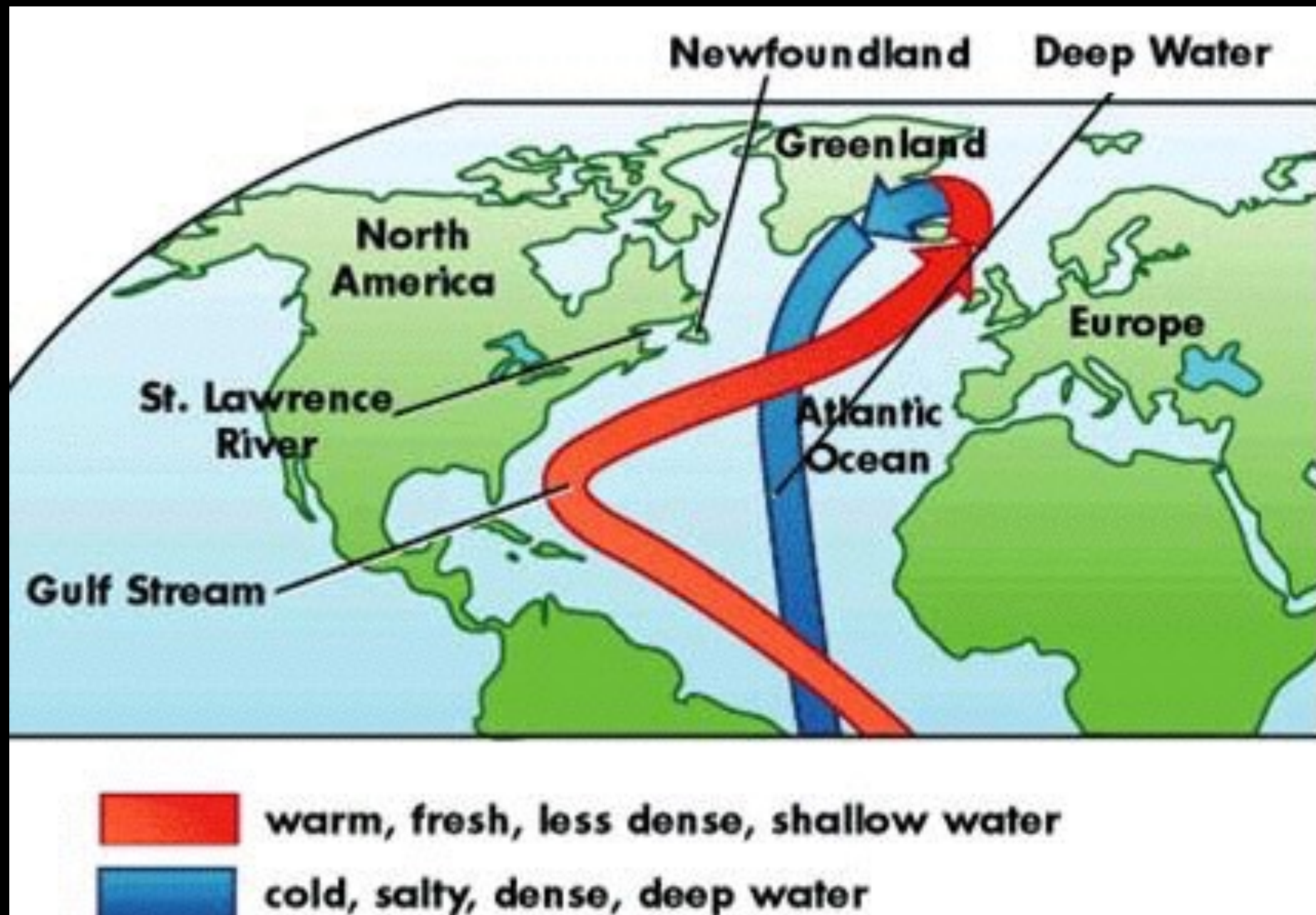


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Gulf Stream



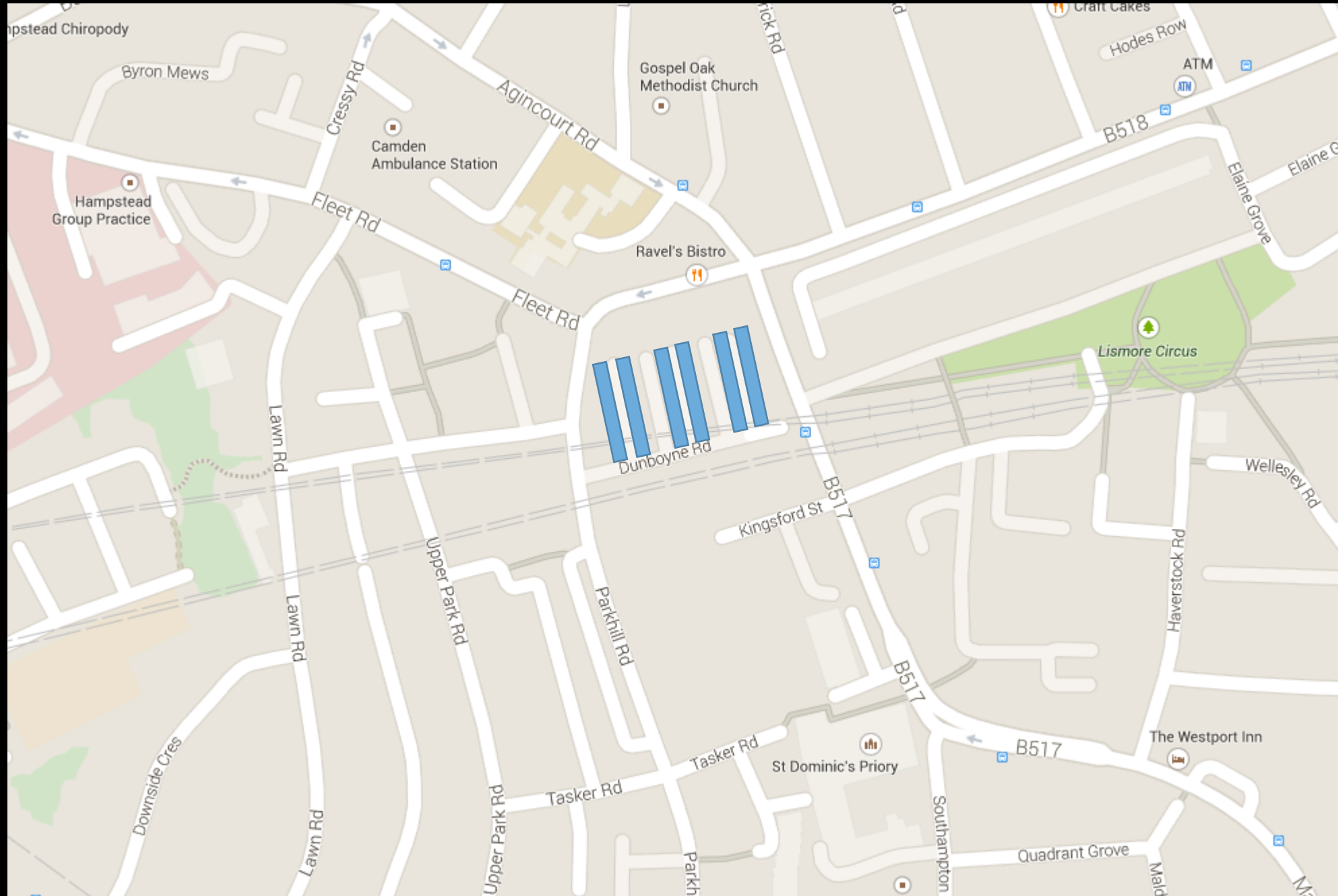
# Gulf Stream



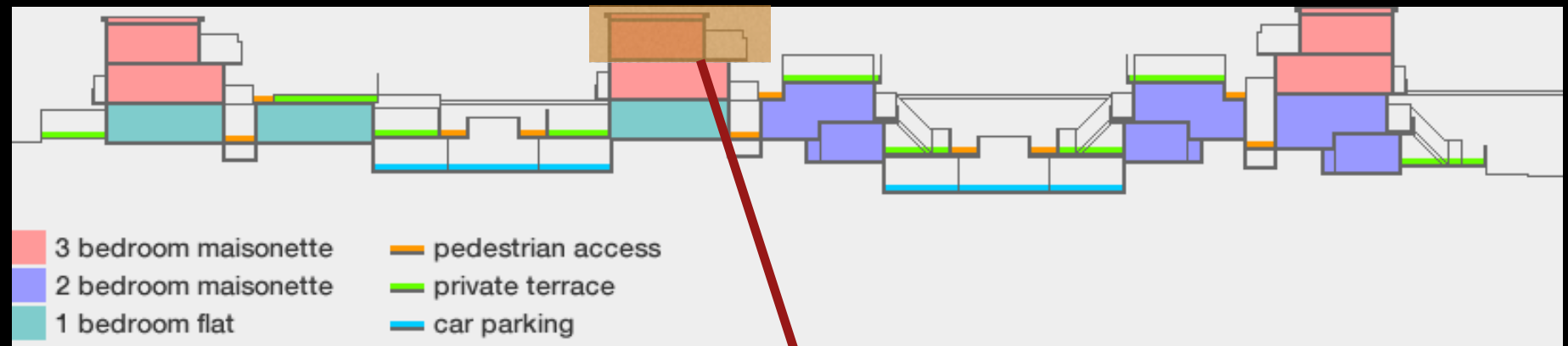
# Solar Analysis



# Solar Analysis – Positioning of Buildings



# Interior

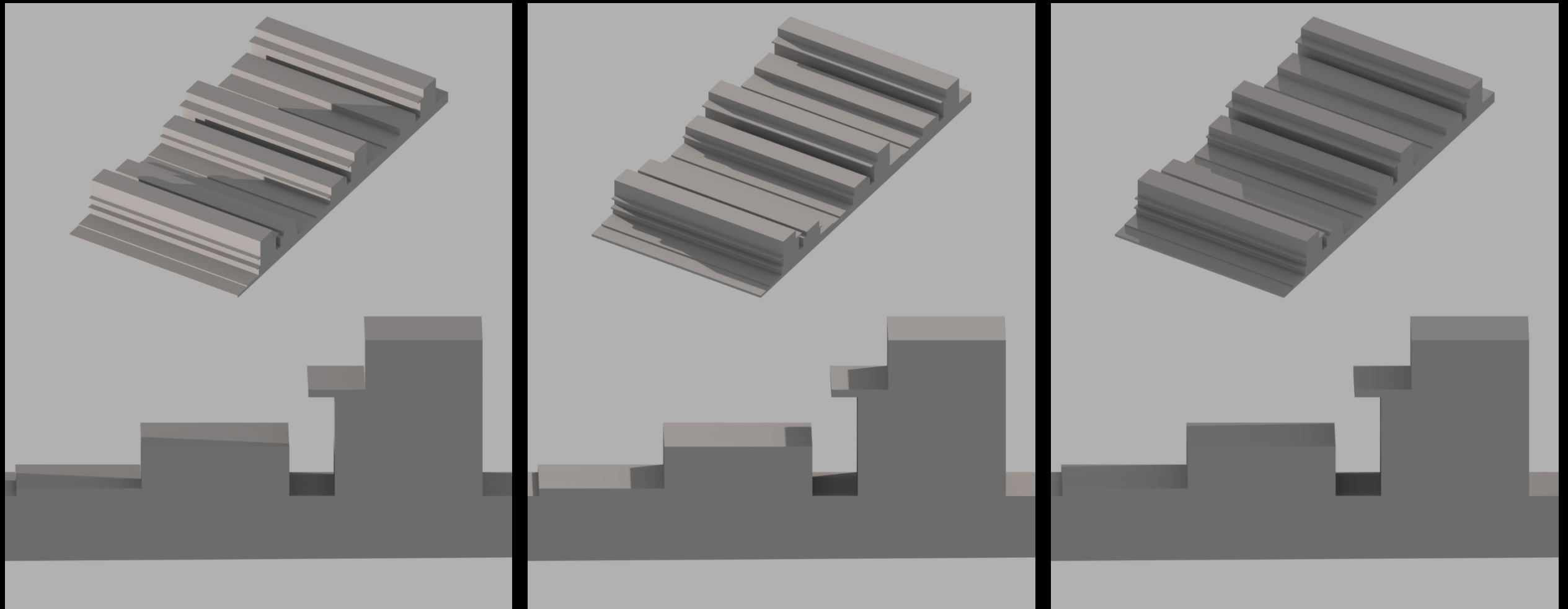


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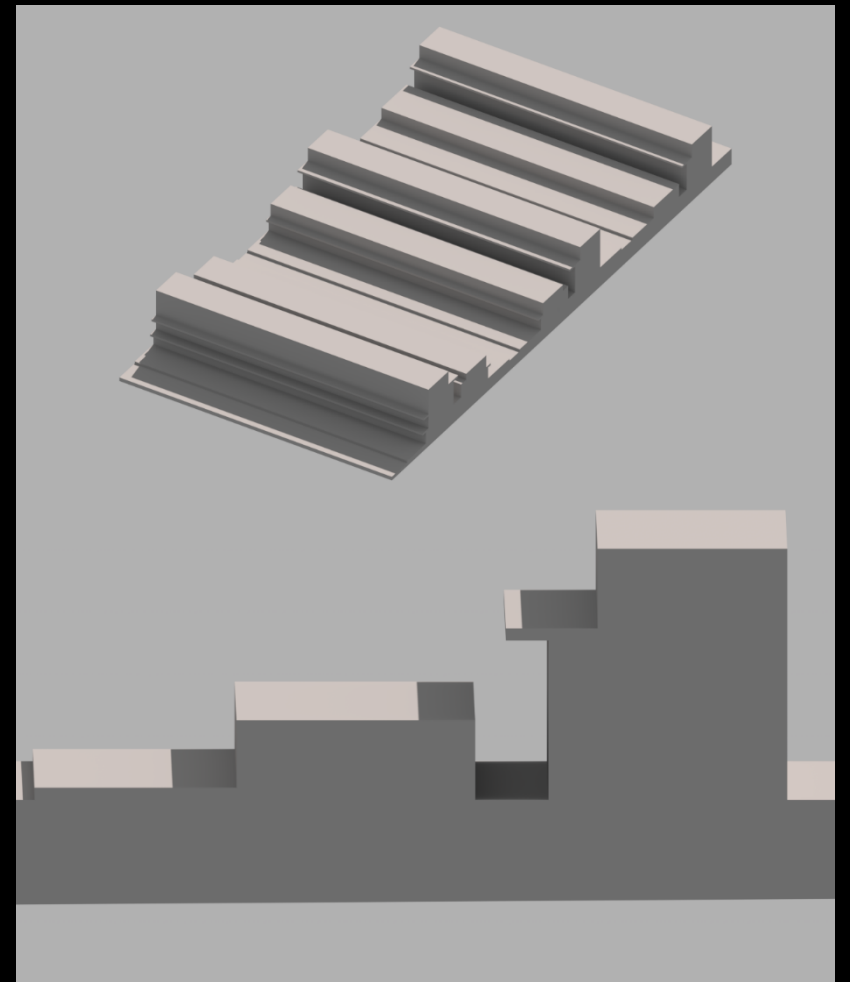
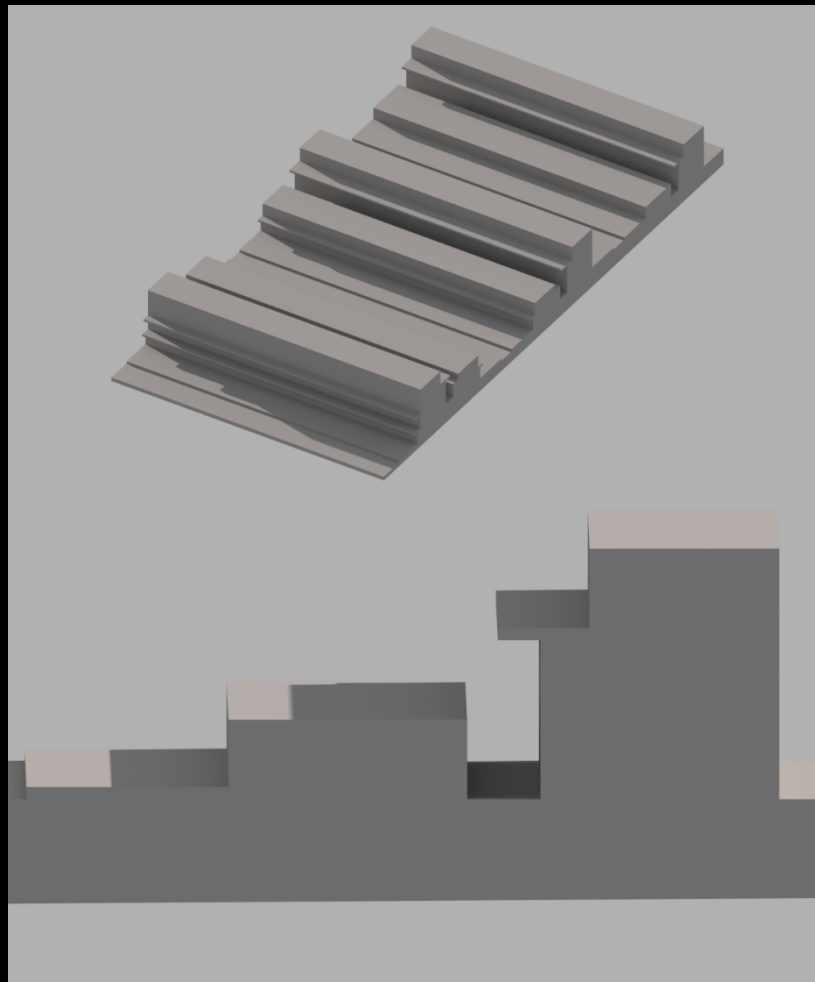
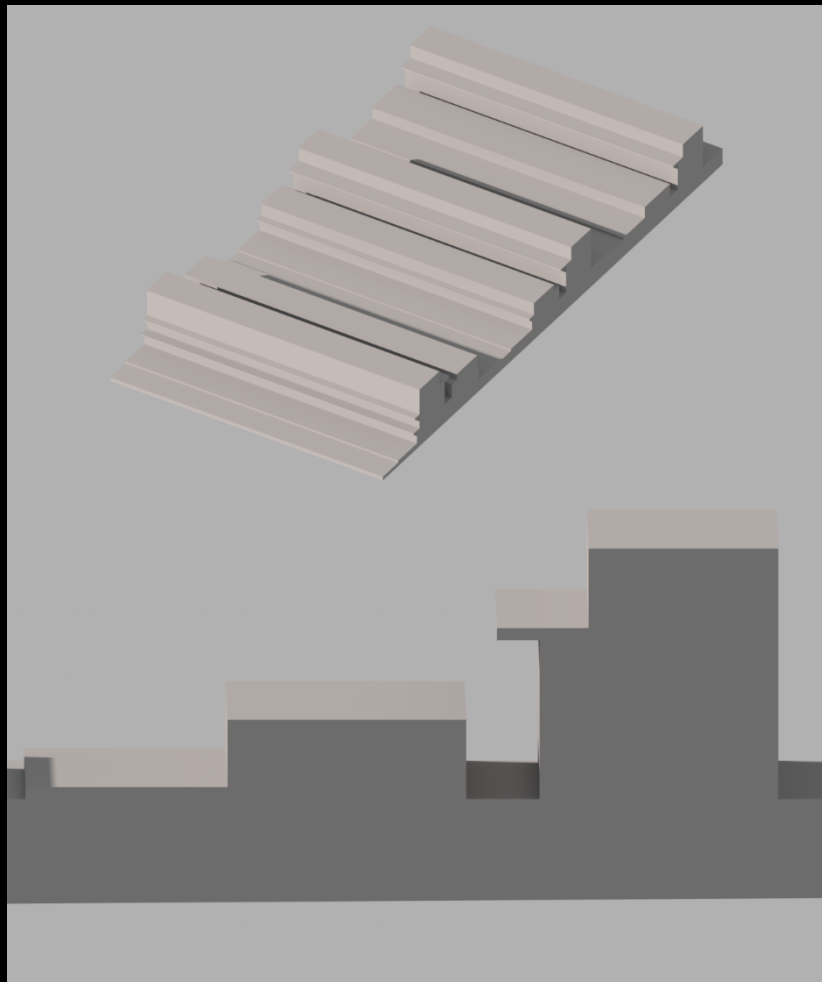


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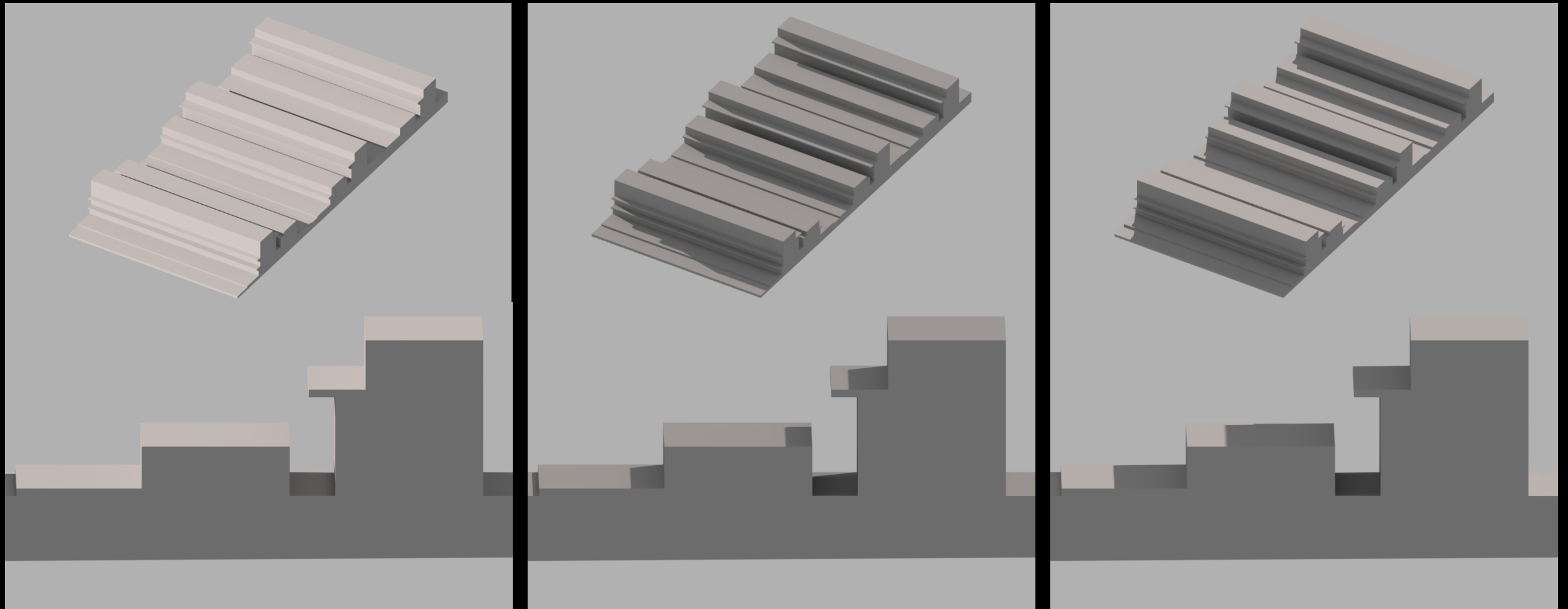
# Solar Analysis – Winter Solstice



# Solar Analysis – Summer Solstice



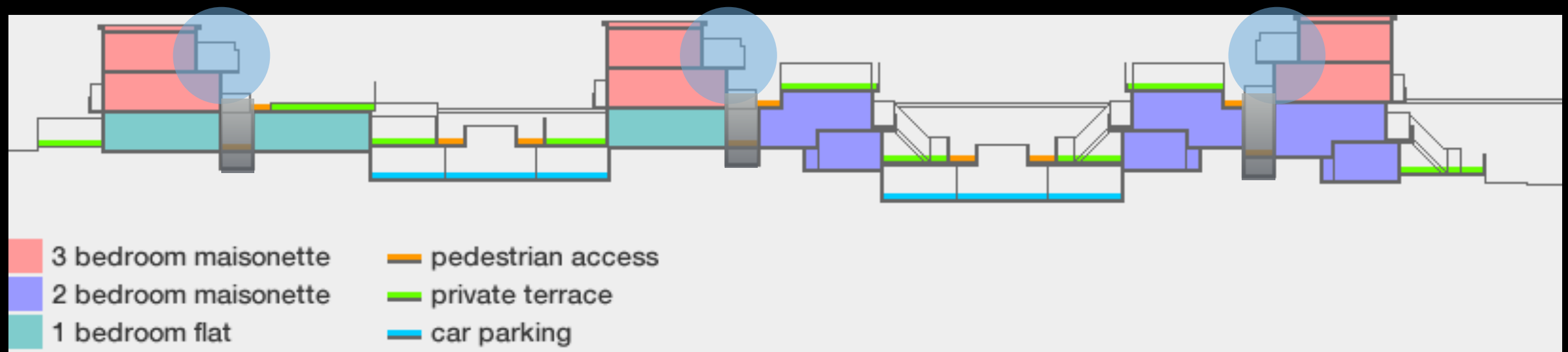
# Solar Analysis – Equinox







# Solar Analysis – Terrace Overhangs



[link](#)

# Solar Analysis – Shade

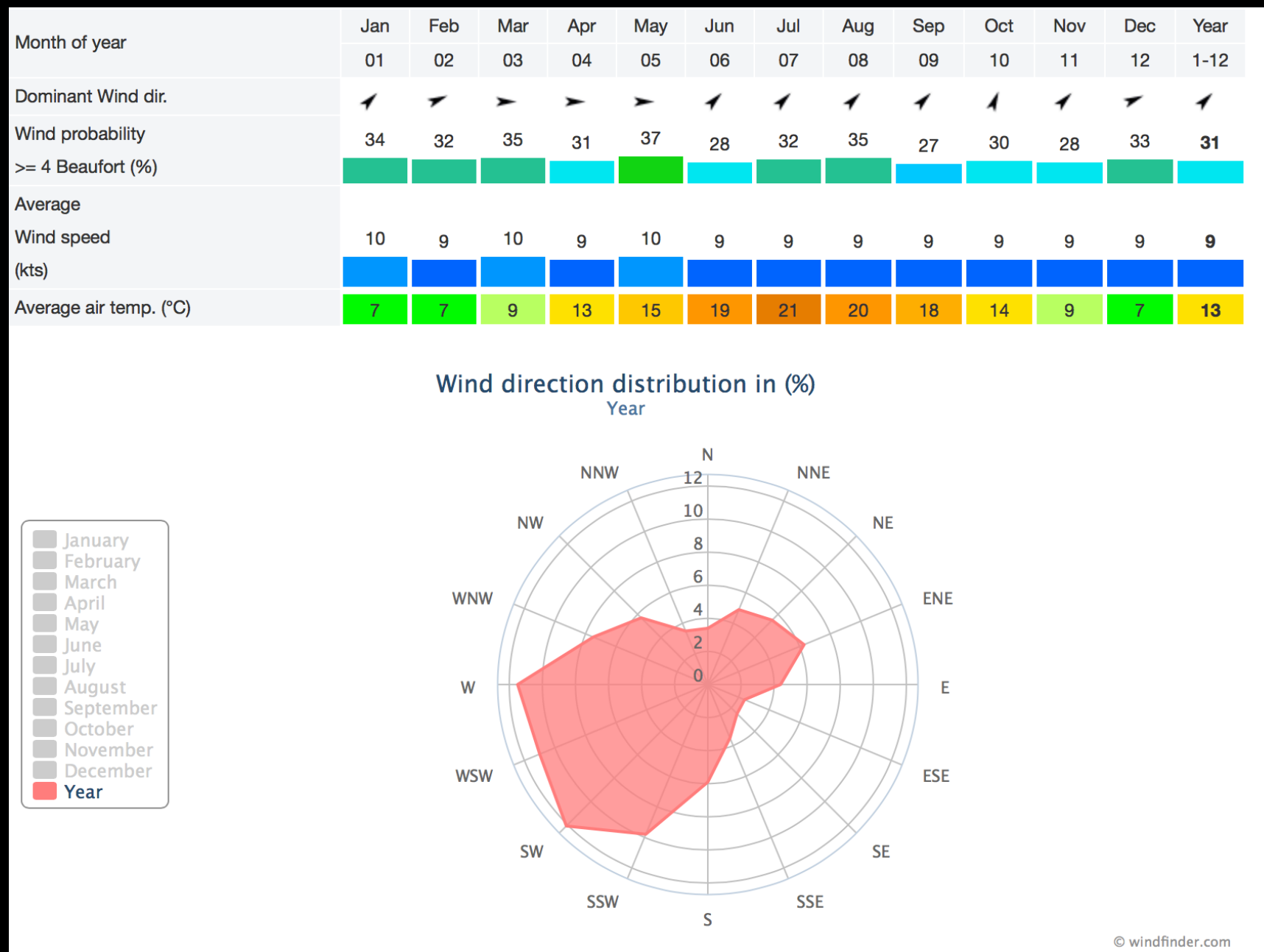


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# Ventilation



# Ventilation – The Weather at Fleet Rd





# Ventilation – The 1 Bedroom Flat



# Ventilation — The Volume of Air Flow

$Q_{\text{wind}} = K \times A \times V$ , where

$Q_{\text{wind}}$  = volume of airflow ( $\text{m}^3/\text{h}$ )

$A$  = area of smaller opening ( $\text{m}^2$ )

$V$  = outdoor wind speed ( $\text{m}/\text{h}$ )

$K$  = coefficient of effectiveness

The terrace window:

(with the highest coefficient of effectiveness:  $90^\circ$  and average yearly wind speed)

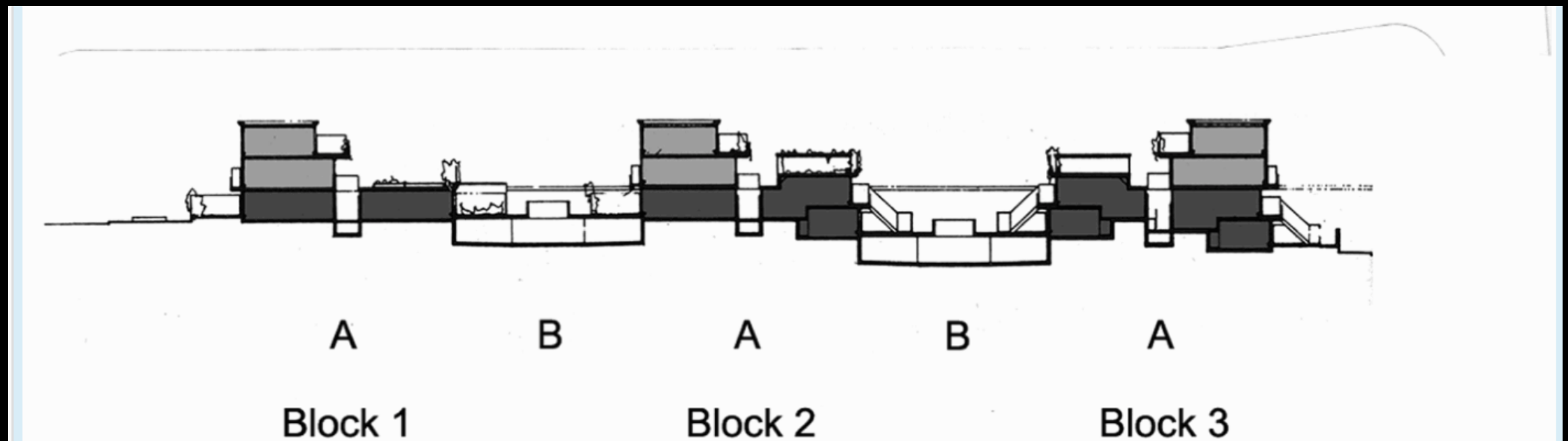
$$Q_{\text{wind}} = 0.8 \times 4 \times 11.968 \\ = 37.33 \text{ m}^3/\text{h}$$

The kitchen window: (with the highest coefficient of effectiveness:  $90^\circ$  and average yearly wind speed)

$$Q_{\text{wind}} = 0.8 \times 0.5 \times 11.968 \\ = 4.787 \text{ m}^3/\text{h}$$

The Terrace window gets 7.8x as much airflow as the kitchen window

# Ventilation — Who Would get Airflow?



# Ventilation — Ways to Improve Airflow

Create larger windows on the west facing fronts of the buildings to allow for more airflow through the building.

Or orient the building so that most of the fronts of buildings get airflow

West wind

South-West wind



[link](#)



Sustainability

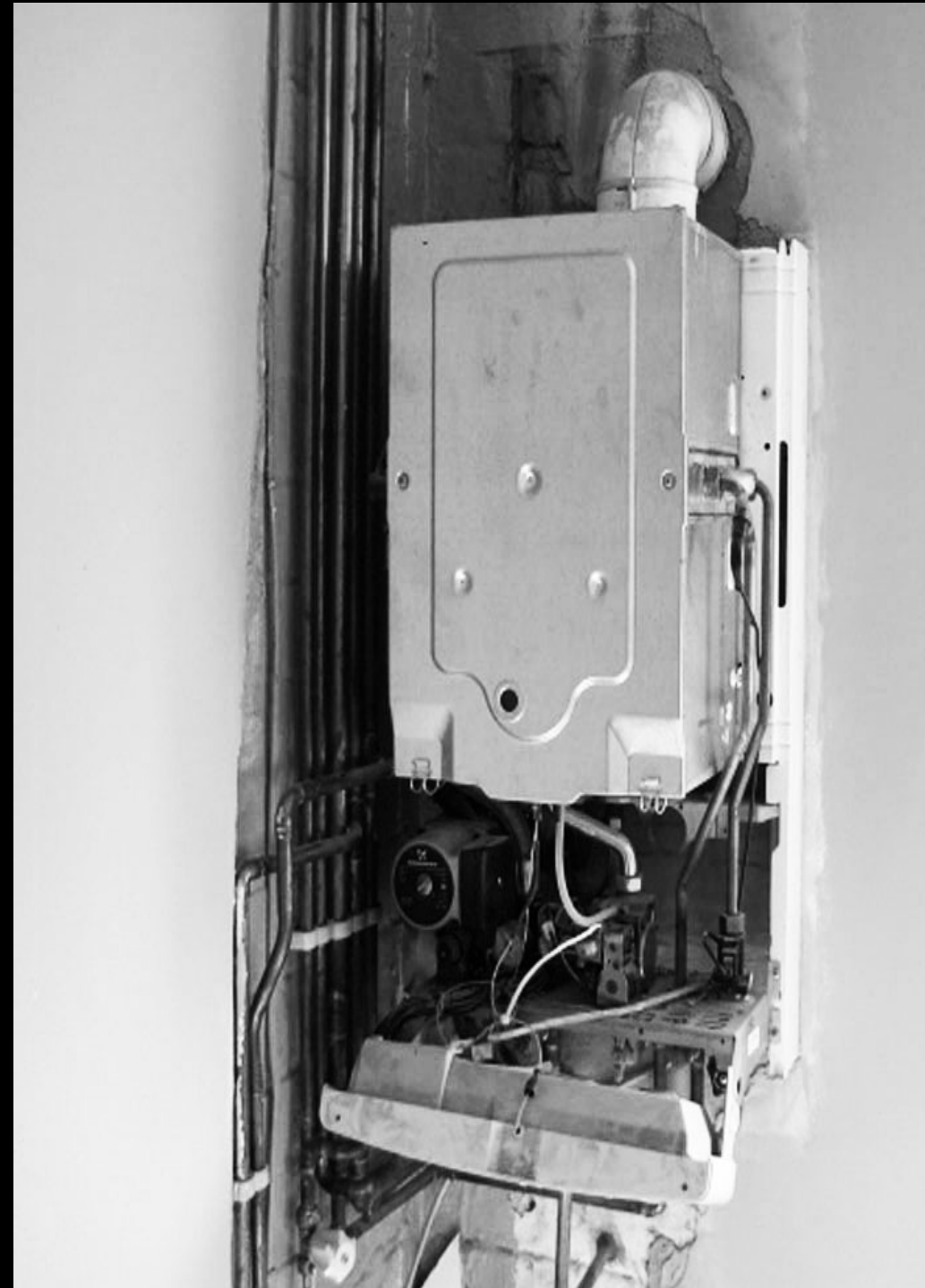
# Sustainability — Sustainability Approach

- high levels of insulation
- low levels of air-permeability
- passive solar design strategies
- low energy lighting
- efficient water use
- benign building materials

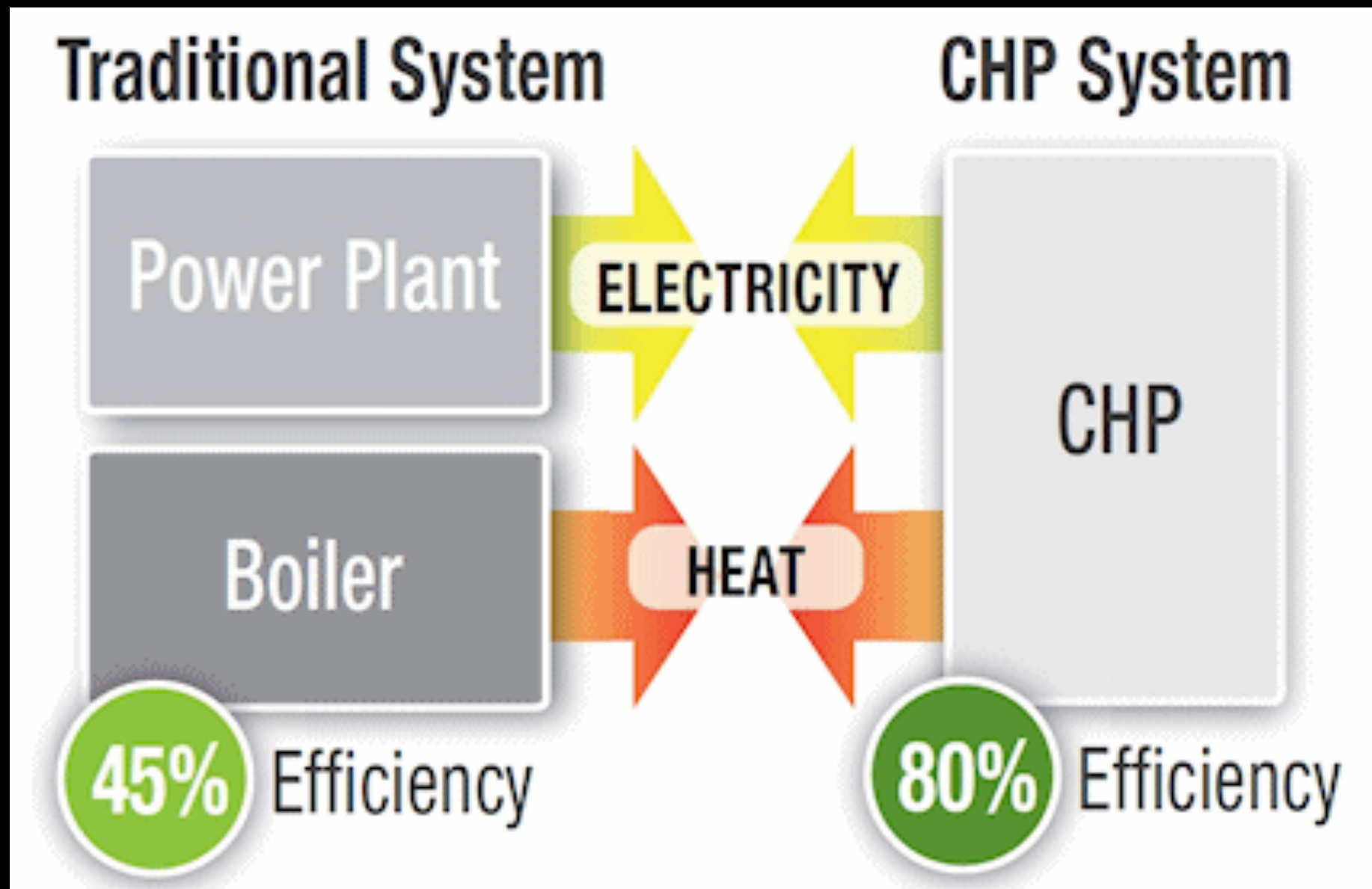
# Sustainability — Sustainability Approach

Traditionally, Fleet Road was heated by **inefficient communal gas boilers**, which are the biggest source of the air pollutant **nitrogen dioxide**.

As of 2011, Camden's Council has implemented **Combined Heat and Power Plants (CHPs)** within Fleet Road.



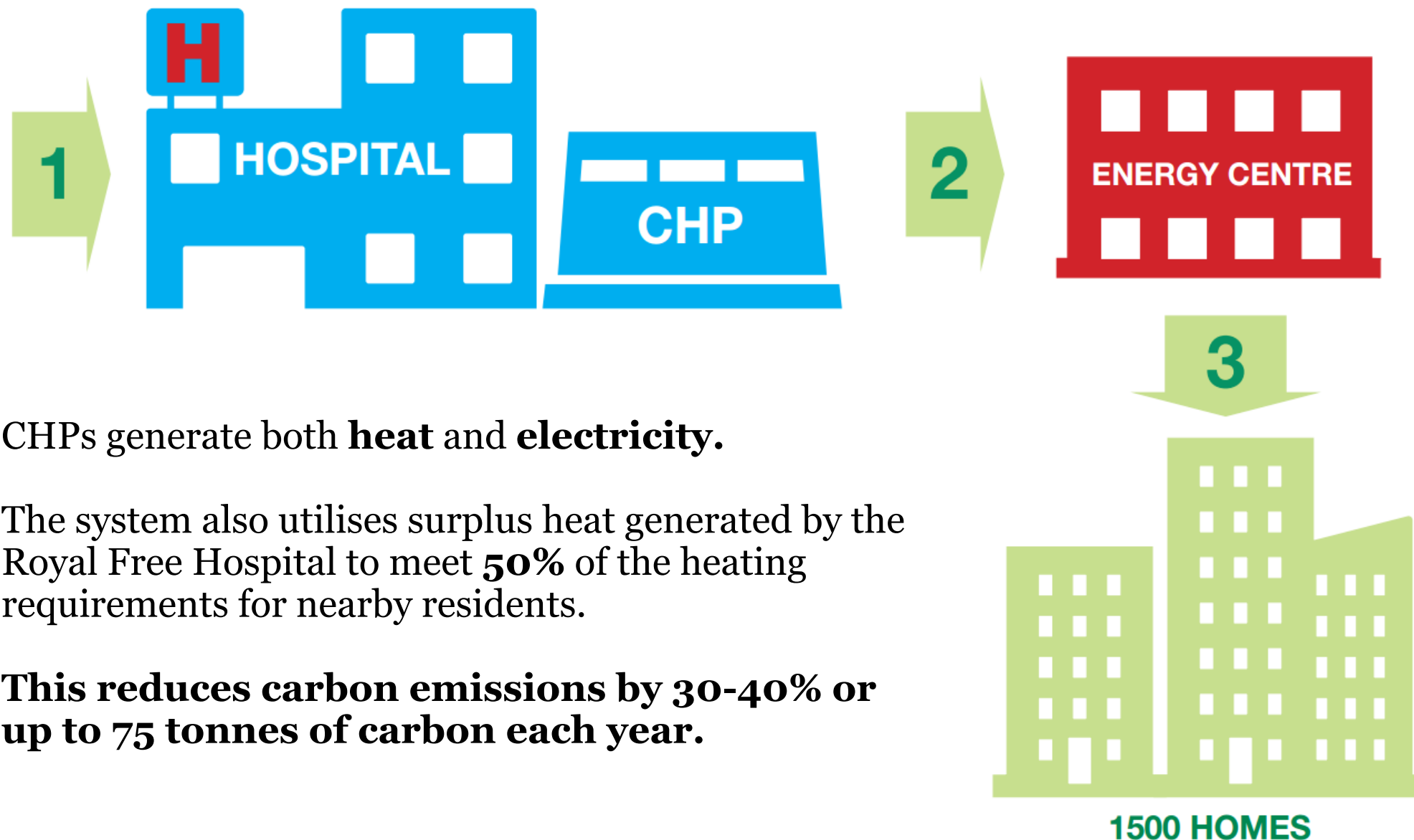
# Sustainability – Sustainability Approach





# Sustainability – Sustainability Approach

## How it works



CHPs generate both **heat** and **electricity**.

The system also utilises surplus heat generated by the Royal Free Hospital to meet **50%** of the heating requirements for nearby residents.

**This reduces carbon emissions by 30-40% or up to 75 tonnes of carbon each year.**

# Sustainability — Building Materials

The houses are built with **concrete** block work. Windows, doors, balcony fronts and fences are in **timber**.



[link](#)



[link](#)



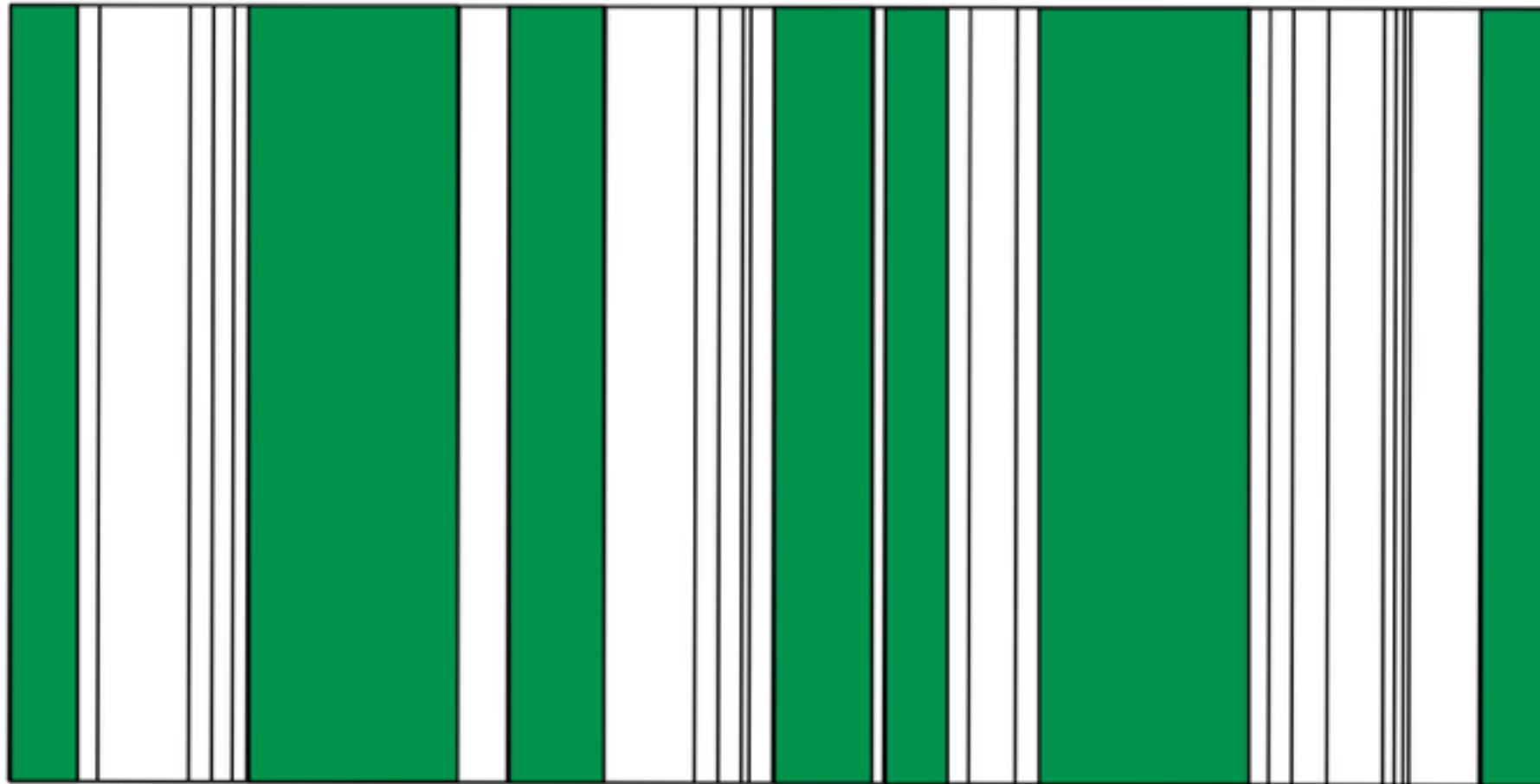
# Sustainability — Ecology

The creation of **shared outdoor terraces** creates the neighbourhood microclimate.

However, these green spaces are not consistent because they are **user maintained**.



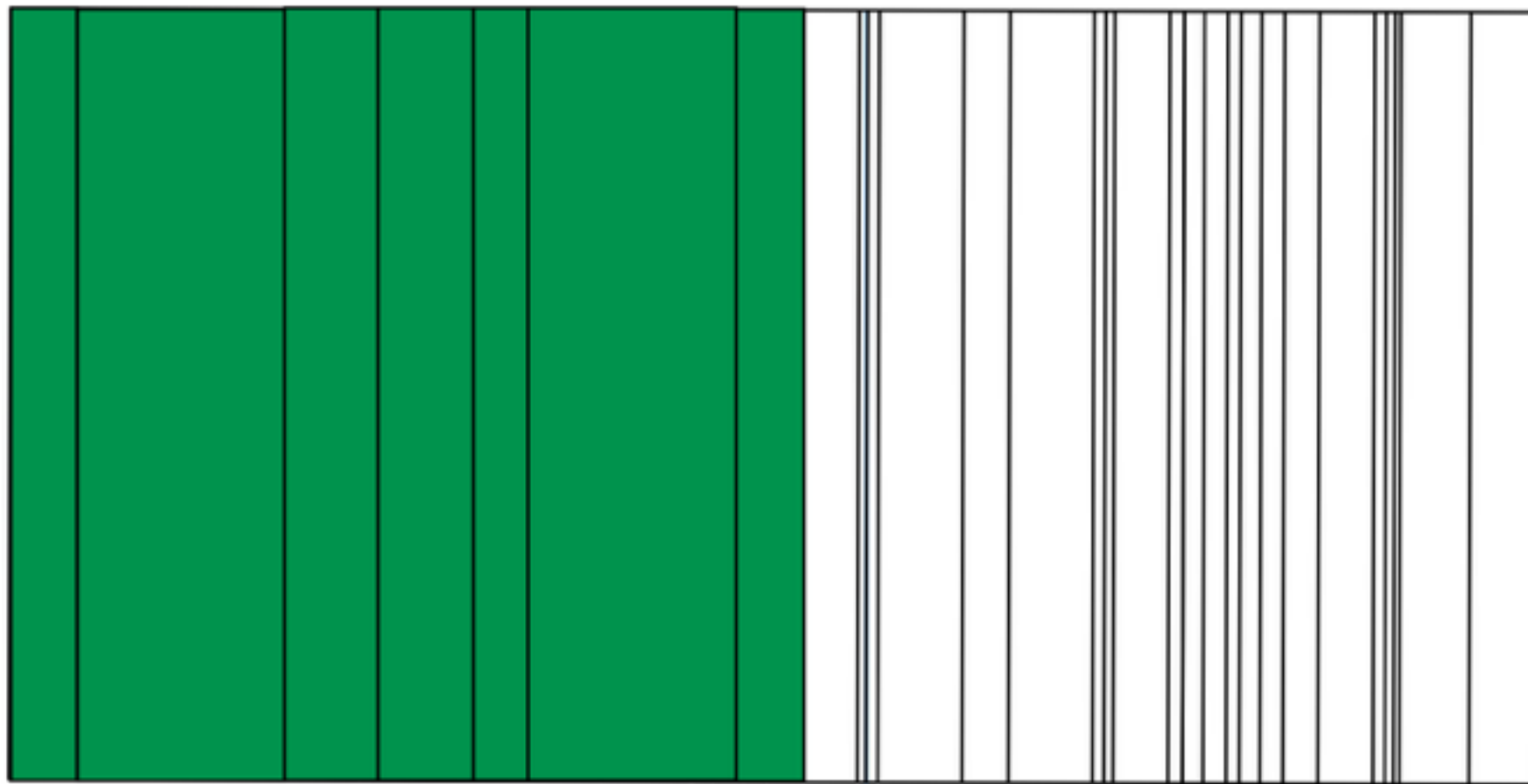
# Sustainability – Ecology



**plan** / outdoor terraces



# Sustainability – Ecology

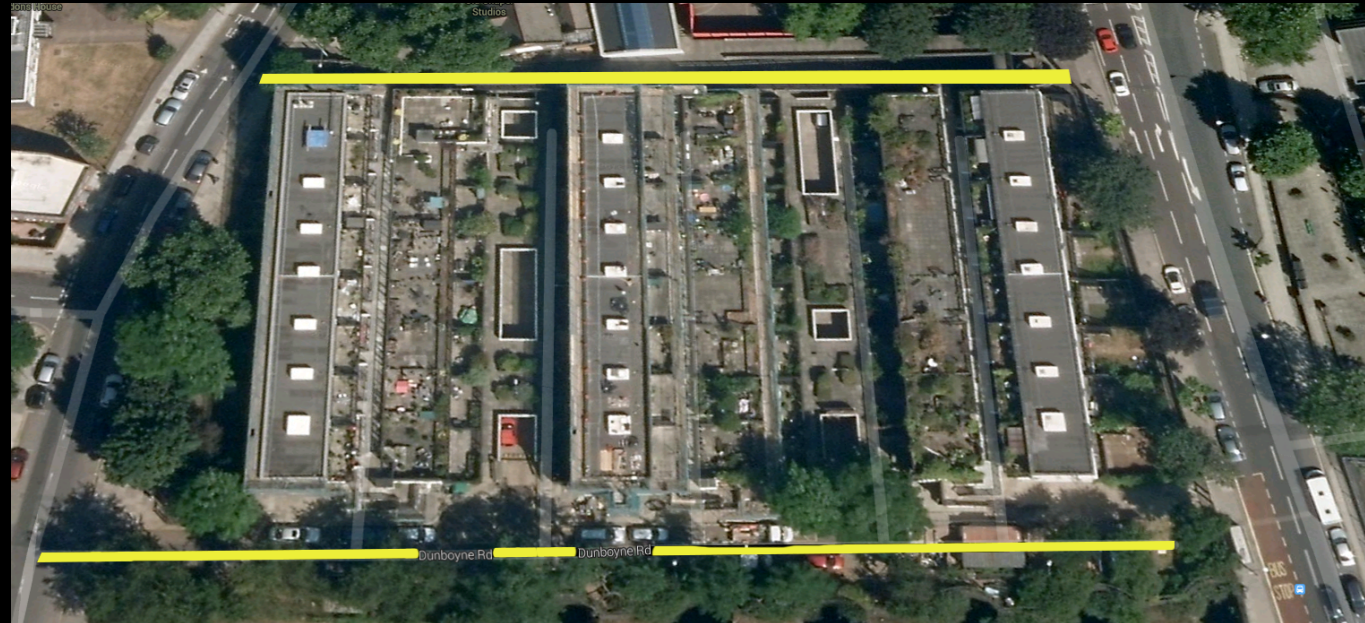


**plan / 50% greenspace**

# Social Relationship

# Social Relationships — What Makes it a Home

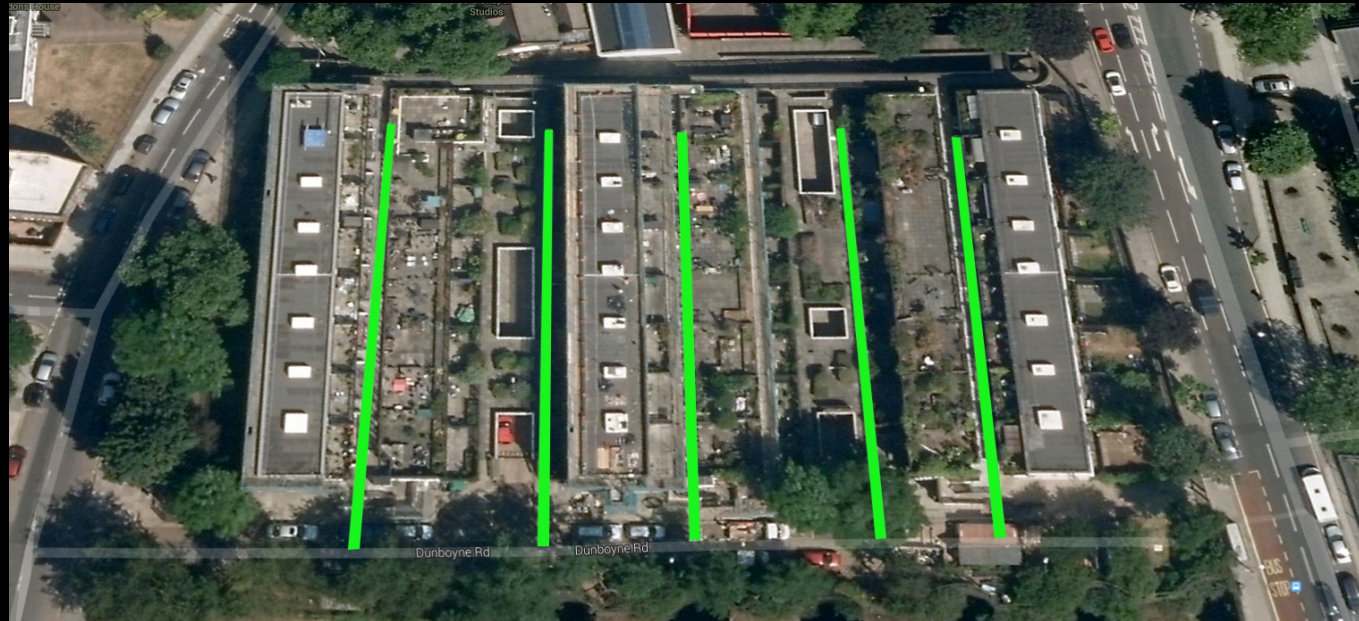
## 1 - Public Spaces





# Social Relationships — What Makes it a Home

1 - Public Spaces



2 - Semi Public Spaces





# Social Relationships — What Makes it a Home

1 - Public Spaces

2 - Semi Public Spaces

3 - Semi Private Spaces





# Social Relationships — What Makes it a Home

1 - Public Spaces

2 - Semi Public Spaces

3 - Semi Private Spaces

4 - Private Spaces



[link](#)

[link](#)



# Social Relationships — Communal Gardens



[link](#)



[link](#)





# Resources

[www.ggardner.myzen.co.uk/content/tags/neave+brown/](http://www.ggardner.myzen.co.uk/content/tags/neave+brown/)  
[list.english-heritage.org.uk/resultsingle.aspx?uid=1393894](http://list.english-heritage.org.uk/resultsingle.aspx?uid=1393894)

<https://www.google.com/earth/>

[modernarchitecturelondon.com/pages/fleet-road.php](http://modernarchitecturelondon.com/pages/fleet-road.php)

[https://www.tumblr.com/search/dunboyne road estate](https://www.tumblr.com/search/dunboyne%20road%20estate)

[zfacts.com/node/253](http://zfacts.com/node/253)

[www.tandfonline.com/doi/pdf/10.1080/13602365.2012.746038](http://www.tandfonline.com/doi/pdf/10.1080/13602365.2012.746038)

[windfinder.com/](http://windfinder.com/)

[journals2.scholarsportal.info.proxy.lib.uwaterloo.ca/details/13602365/v17i0006/973\\_danffudocfre.xml](http://journals2.scholarsportal.info.proxy.lib.uwaterloo.ca/details/13602365/v17i0006/973_danffudocfre.xml)

# Resources

[www.ctm.co.uk/gallery/Gas\\_and\\_Heating/Fitting\\_a\\_Combi\\_boiler/Fitting a new boiler 1 The 15 year old boiler to be replaced.jpg](http://www.ctm.co.uk/gallery/Gas_and_Heating/Fitting_a_Combi_boiler/Fitting%20a%20new%20boiler%201%20The%2015%20year%20old%20boiler%20to%20be%20replaced.jpg)

[www.midatlanticchptap.org/images/cleanEnergy/chp/comparison.gif](http://www.midatlanticchptap.org/images/cleanEnergy/chp/comparison.gif)

[www.camden.gov.uk/](http://www.camden.gov.uk/)

[media.rightmove.co.uk/76k/75239/30583866/75239\\_74808S\\_IMG\\_00\\_0000.JPG](http://media.rightmove.co.uk/76k/75239/30583866/75239_74808S_IMG_00_0000.JPG)

[www.islingtontribune.com/sites/all/files/nj\\_islington/images/reviews/features/feature02b\\_o.jpg?1274970957](http://www.islingtontribune.com/sites/all/files/nj_islington/images/reviews/features/feature02b_o.jpg?1274970957)