



# Air Quality in London

Tina Liu, Zaria  
Rankine



# Target Customer

We explored air quality data for different boroughs of London, in an aim to provide insights useful to potential house buyers.

Our stakeholders are property websites like Rightmove and Zoopla, who provides area guides for property purchase.

**rightmove**   
find your happy

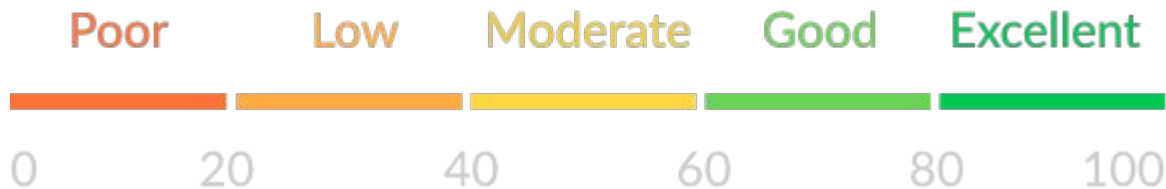
**Zoopla**  
Smarter property search

# Air Quality

We used the Breezo Air Quality Index as measure of air quality,

The BAQI is an in-house produced global measure of air quality, combining national AQI index, academic research and latest real-time data. The BAQI Scale puts air quality on a scale of 0 to 100.

As air quality data is dynamic and fast-changing, Breezo is able to provide a hourly basis measure of air quality data, which can be different at any given time from street to street.



# Method

For our analysis we used:

- London Borough Demographics Data CSV.
- MapBox API for latitude and longitude coordinates for our boroughs.
- BreezoMeter API with hourly Air Quality reports

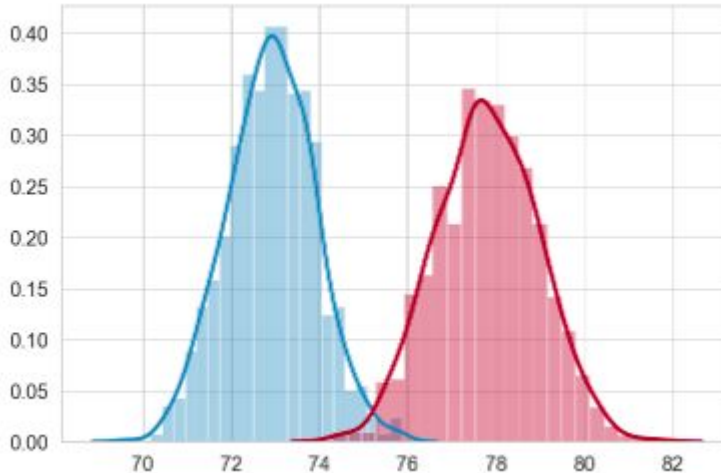
We chose to select the boroughs with most and least green space, highest and lowest average house prices, and grouped the data by inner and outer London, and by Labour and Conservative constituencies.

# Hypothesis 1

H0: Air quality of boroughs in Inner London = Air quality of boroughs in Outer London

H1: Air quality of boroughs in Inner London  $\neq$  Air quality of boroughs in Outer London

Inner London mean: 72.907  
Outer London mean: 77.803  
Welch T-Stat: 102.095  
P-Value: 0.0  
Cohen's d: -4.568  
Power: 1.0.



# Hypotheses 2 and 3

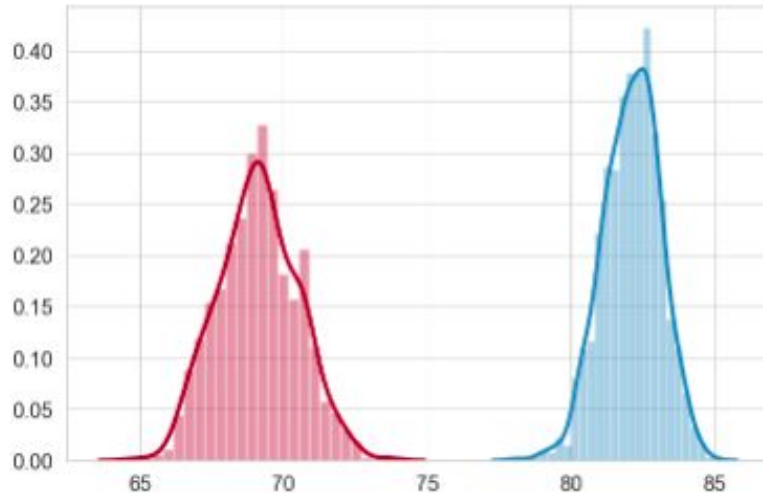
H0: Air quality of borough A = Air quality of borough B

H1: Air quality of borough A  $\neq$  Air quality of borough B

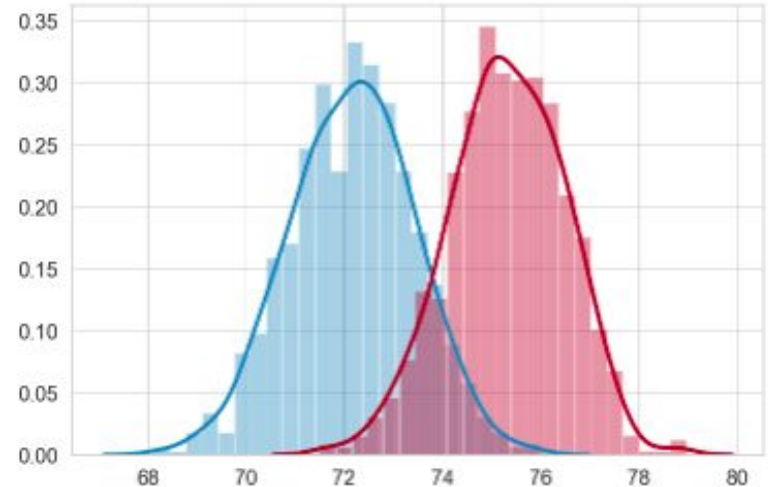
Havering mean: 82.102  
City of London mean: 69.075  
T-Stat: 240.322  
P-Value: 0.0  
Cohen's d: 10.753

Kensington and Chelsea mean: 72.163  
Barking and Dagenham mean: 75.310  
T-Stat: 240.322  
P-Val: 0.0  
Cohen's d: -2.5828

Most and Least Green Space:  
Havering and City of London



Highest and Lowest Avg House Price:  
Kensington and Chelsea and Barking and  
Dagenham

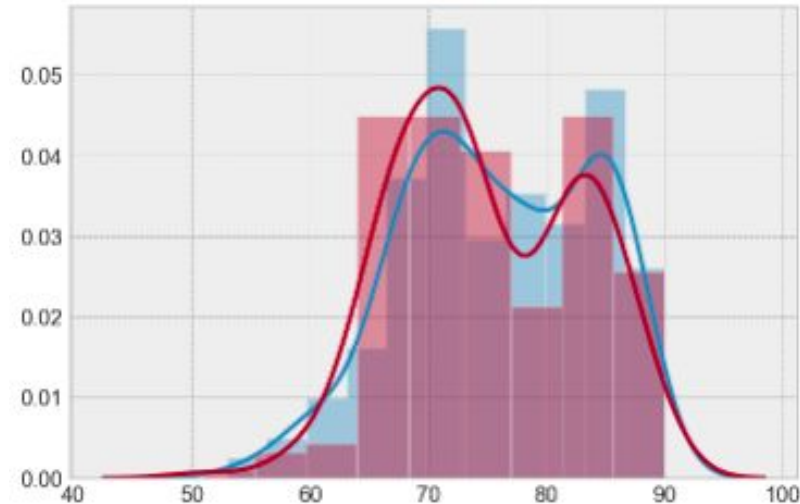


# Hypothesis 4

H0: Air quality of Conservative boroughs = Air quality of Labour boroughs

H1: Air quality of Conservative boroughs  $\neq$  Air quality of Labour boroughs

Labour mean: 75.887  
Conservative mean: 75.051  
Welch's T-Stat: 1.296  
P-Value: 0.195



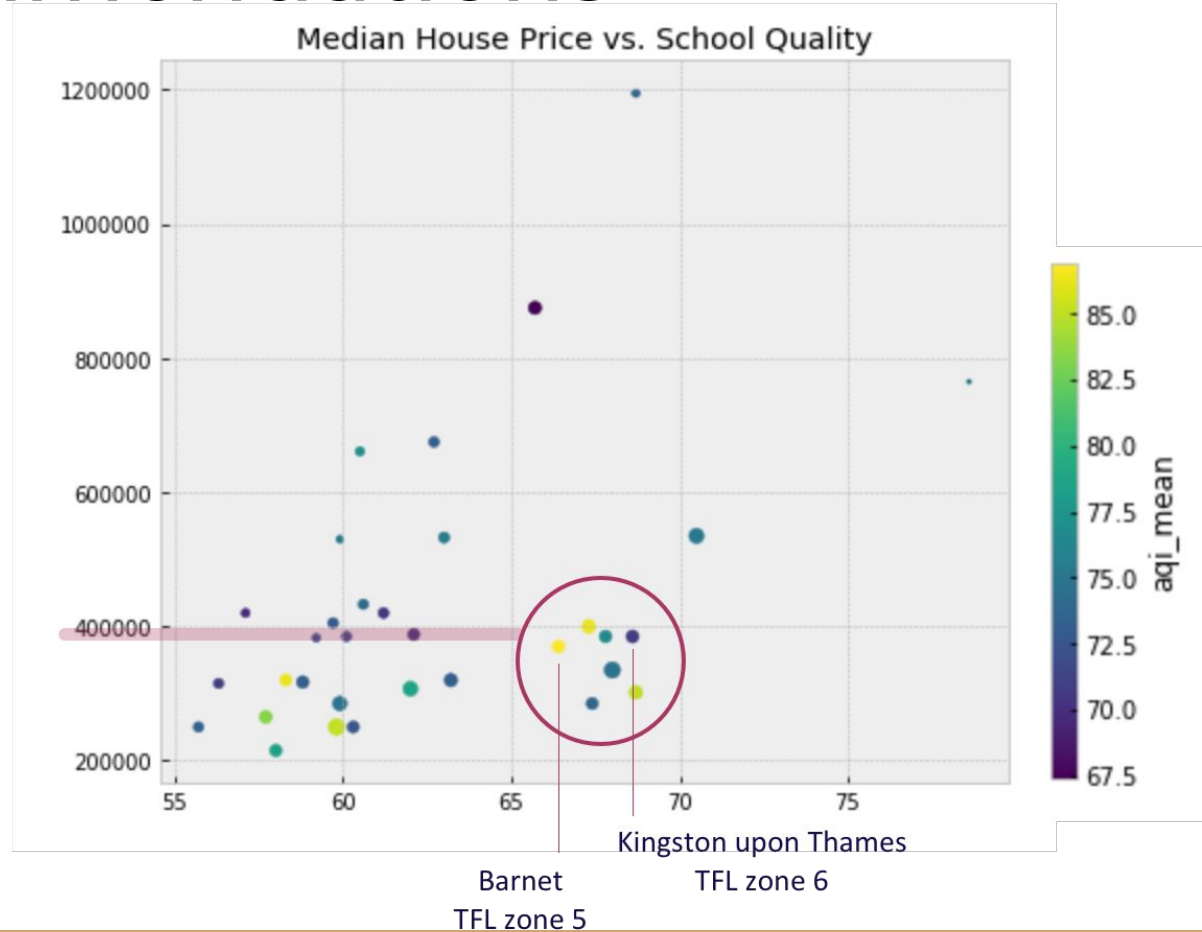
# Recommendations

Although we can conclude different areas have significant differences in Air Quality, we would be cautious to use it as a measure of desirability of an area.

As AQI isn't positively correlated with **other important factors**, we advise considering as many variables as possible when moving house.



# Recommendations



# Recommendations

Given that areas have significantly different Air Quality scores, we would suggest that it is included on property websites, amongst the useful info boxes

## Nearest stations

-  Sloane Square (0.5 mi)
-  Battersea Park (0.6 mi)
-  Victoria (0.6 mi)

Distances are straight line

measurements from centre of postcode



[View Tube and Rail map](#)

## Nearest schools

[Use the school checker >](#)

## Broadband



[Show average  
broadband speed at  
this postcode](#)

## Estimated running costs

Based on available 3rd party data



## Mortgage calculator

Price	Deposit (10%)	£2,861 per month In partnership with
£750000	£75000	
Repayment term	Interest rate	
25 years	2%	

Your home or property may be repossessed if you do not keep up repayments on your mortgage.

These results are not provided by NatWest and are only indicative based on a repayment mortgage product. Repayments will be subject to the product provided and your circumstances.



Q & A