



# Capstone London

Analysis of optimal locations for establishing a Vegan Delivery restaurant

Andy Brierly

Coursera assignment – December 2019

# Executive summary

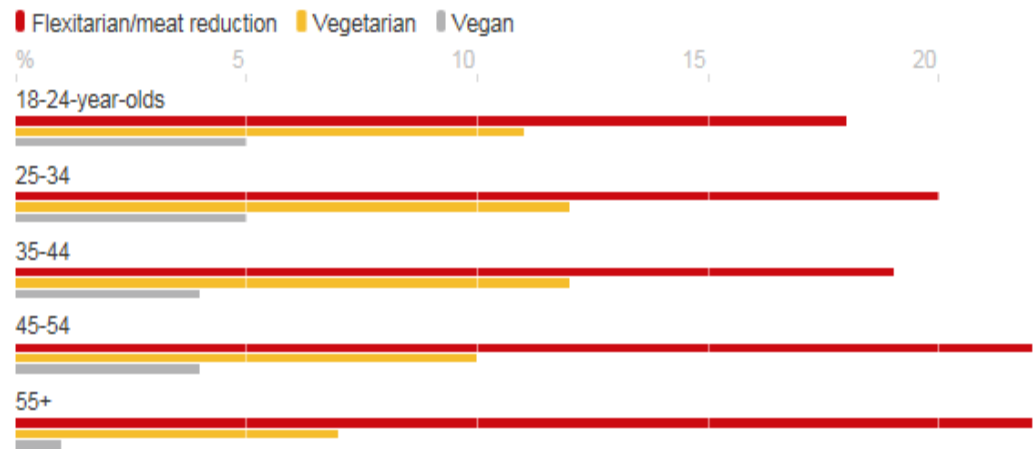
- This presentation looks at the initial findings from a review of London districts as a location for a new Vegan takeaway restaurant.
- The analysis has focused on two adjacent boroughs:
  - Westminster
  - Camdenwhich are found to have relatively high consumer expenditure on food, high spending growth projections and large populations aged 16-29, which is our target demographic for this industry.
- Having chosen these boroughs, we have examined data for spending on takeaway food at a local postal district level to identify the optimal locations for a business that is likely to have a delivery range of 2 km.
- Clustering analysis was also applied to the data, in order to see how relative location and expenditure interacted.
- The optimal locations were found to be around West Hampstead, Belsize Park and Bayswater.
- We then utilise Foursquare's APIs to identify where existing Vegan can be found around our target areas. There is strong clustering around Camden Town and Bayswater, but limited offerings in Hampstead/Belsize Park.
- We therefore recommend the Hampstead area for further analysis.

*Over the past 12 months, London has witnessed the opening of not just vegan restaurants, but a vegan pub, its first vegan doughnut shop, the debut of a meat-free "bleeding" burger, high street and fast food chains introducing vegan menus, and an entire new street food scene devoted to "plant-based," meat-free, dairy-eschewing foods.*

**London.Eater.com**

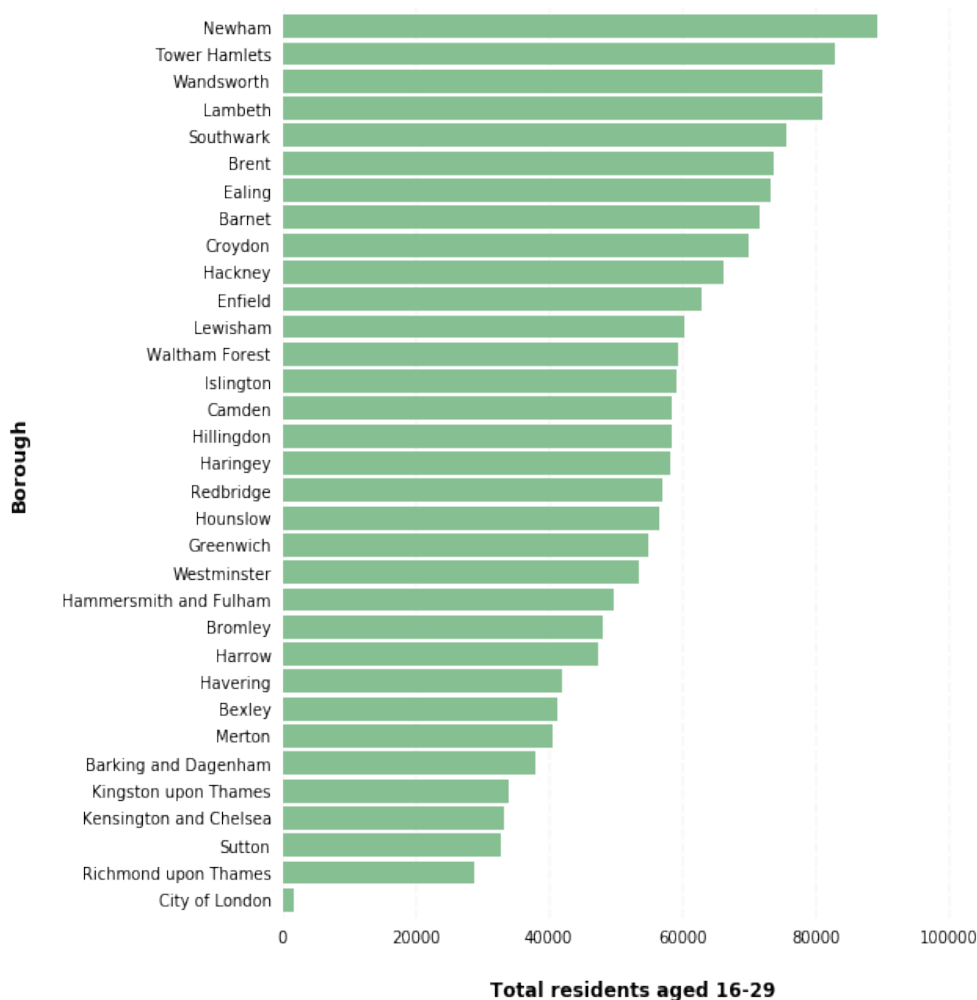
# Vegan market opportunity

- With 600,000 people believed to be vegan in the UK in 2018, orders of vegan takeaways grew 388% between 2016 and 2018 while vegetarian orders rose 137%, according to research by the British Takeaway Campaign.
- The online delivery platform Deliveroo reported that vegan orders had quadrupled over the past two years and said that in the last 12 months the number of vegan restaurants on the app increased by 168%, making it one of the fastest-growing categories.
- Given these trends, there is strong interest from start-up catering businesses in tapping this market.
- This data science research project will assess London as the location for a new Vegan take-away restaurant, in order to help a start-up decide where best to locate their new business.
- The analysis will look at spending patterns at a borough and postcode geographic level, as well as demography.
- Research by the high-end UK supermarket chain Waitrose, based on a survey of customers in 2018, shows the 18-34 year old demographic to be the biggest consumers of vegan and vegetarian food, so this will be a key factor in choosing a location.



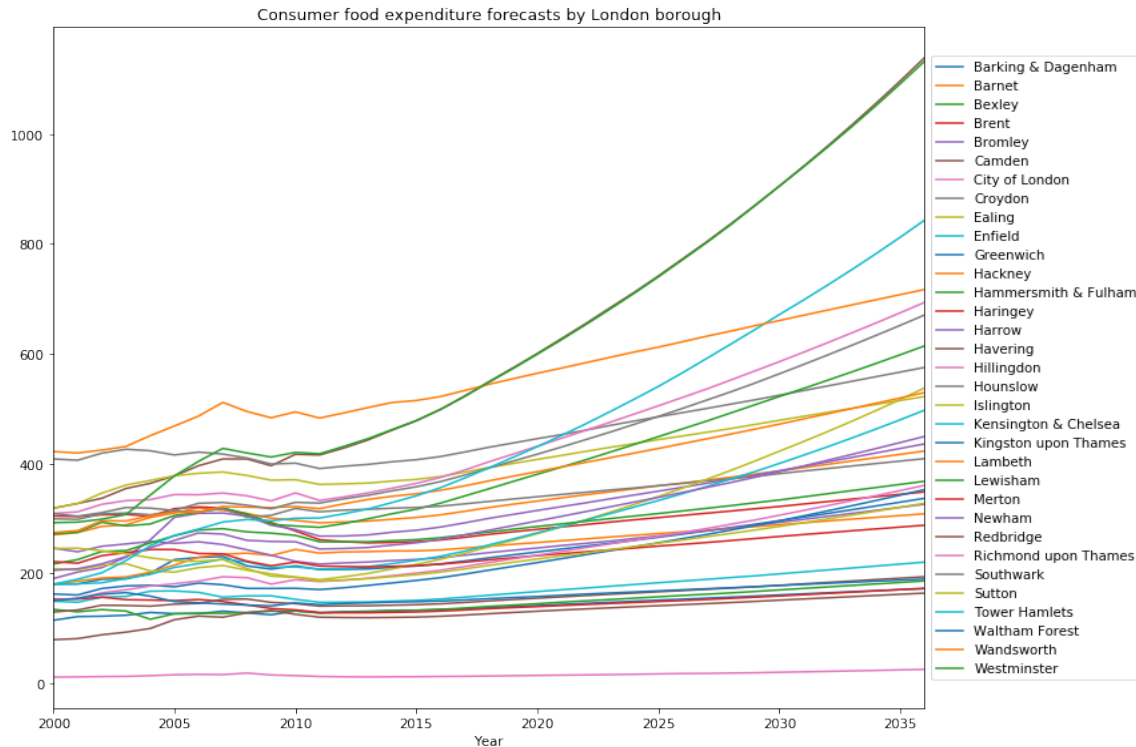
Guardian Graphic | Source: Waitrose food and drink report 2018-19

# Demographics – younger populations by borough



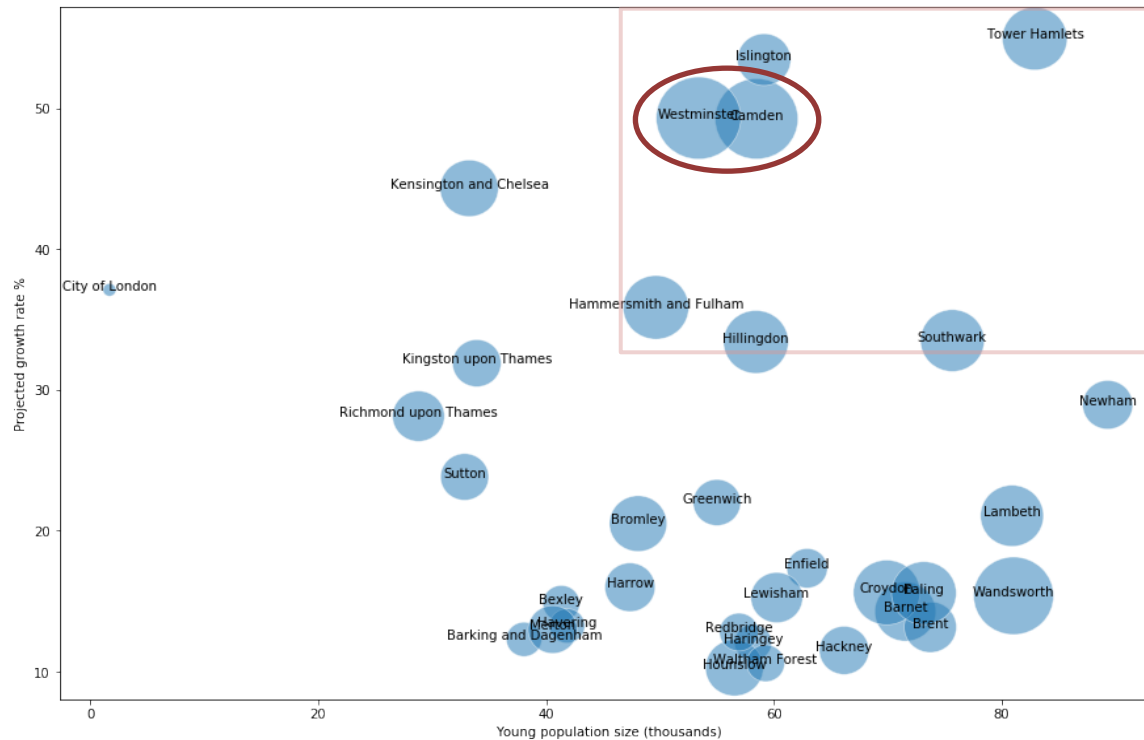
- Data from the Greater London Authority shows the number of residents aged 16-29 in each London borough.
- Newham has the highest young population, with around 90,000 residents, whereas the financial centre, the City of London, has less than 2,000.
- However, some of the boroughs with the highest youth populations are also some of the poorest, so this analysis needs to be combined with an assessment of consumer spending and growth.

# Consumer food spending trends by borough



- The London Government's Datastore service provides projections of consumer expenditure on food by borough from 2006 to 2036.
- Although this data is 6 years old, it provides a good indication of current spending and growth potential.
- The chart above has too much information to identify which boroughs to target, but gives an impression of growth trends expected across London.

# Food expenditure, growth and young population

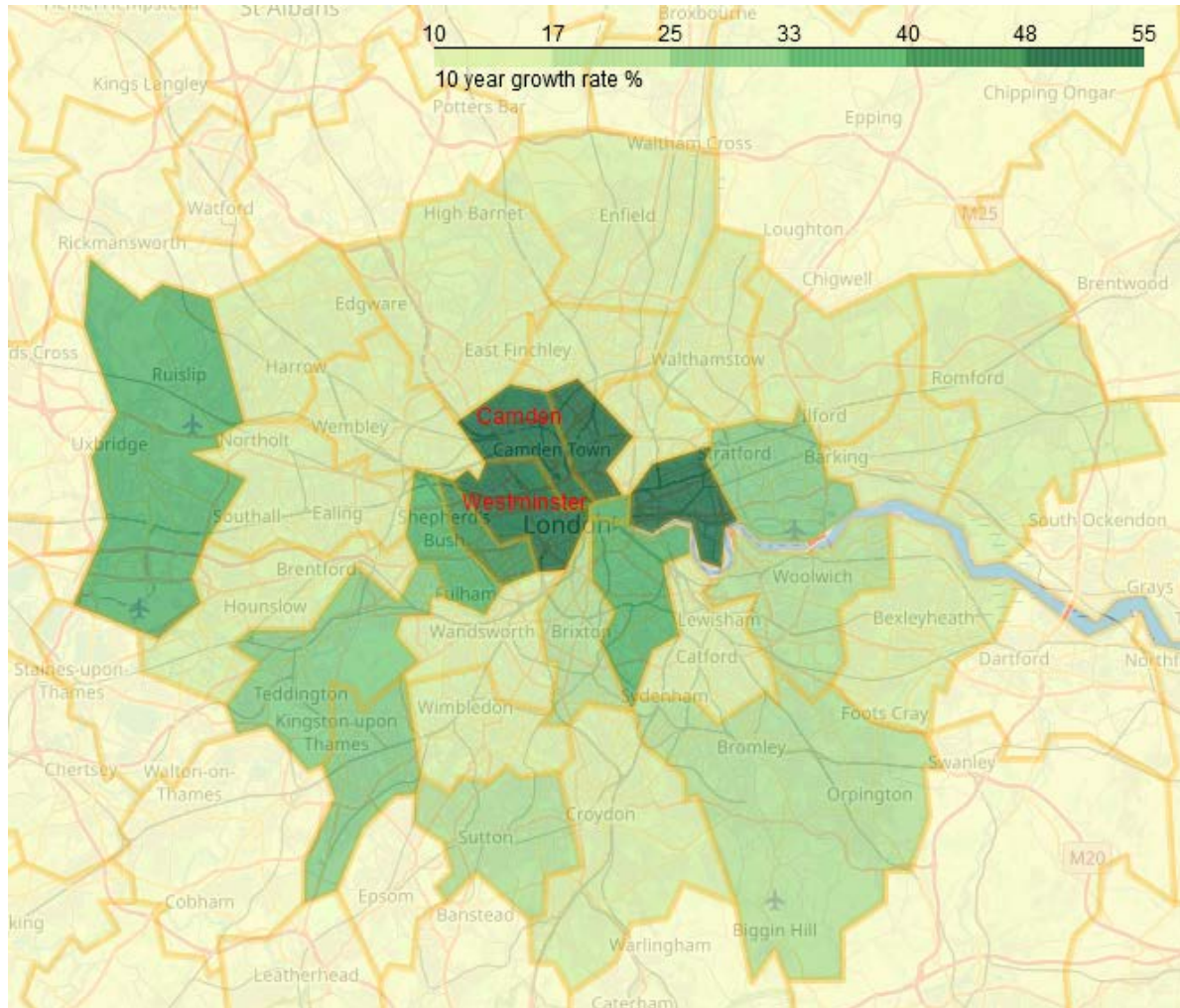


- Using a bubble chart of 2019-2029 10-yr growth projections vs size of target population, with 2019 food spending levels being represented by bubble size, we can clearly identify the stronger candidates sitting in the upper quartile.
- Westminster and Camden both have a large young population (over 50,000), high growth prospects (around 50% over the next 10 years) and large current household food expenditure.

- If these two boroughs prove to be unsuitable when the analysis moves to the more granular level or the practical aspects of setting up in these relatively expensive areas, there is an opportunity to go back and run the detailed analysis on the smaller markets: Tower Hamlets, Islington and potentially Hammersmith, Hillingdon and Southwark.

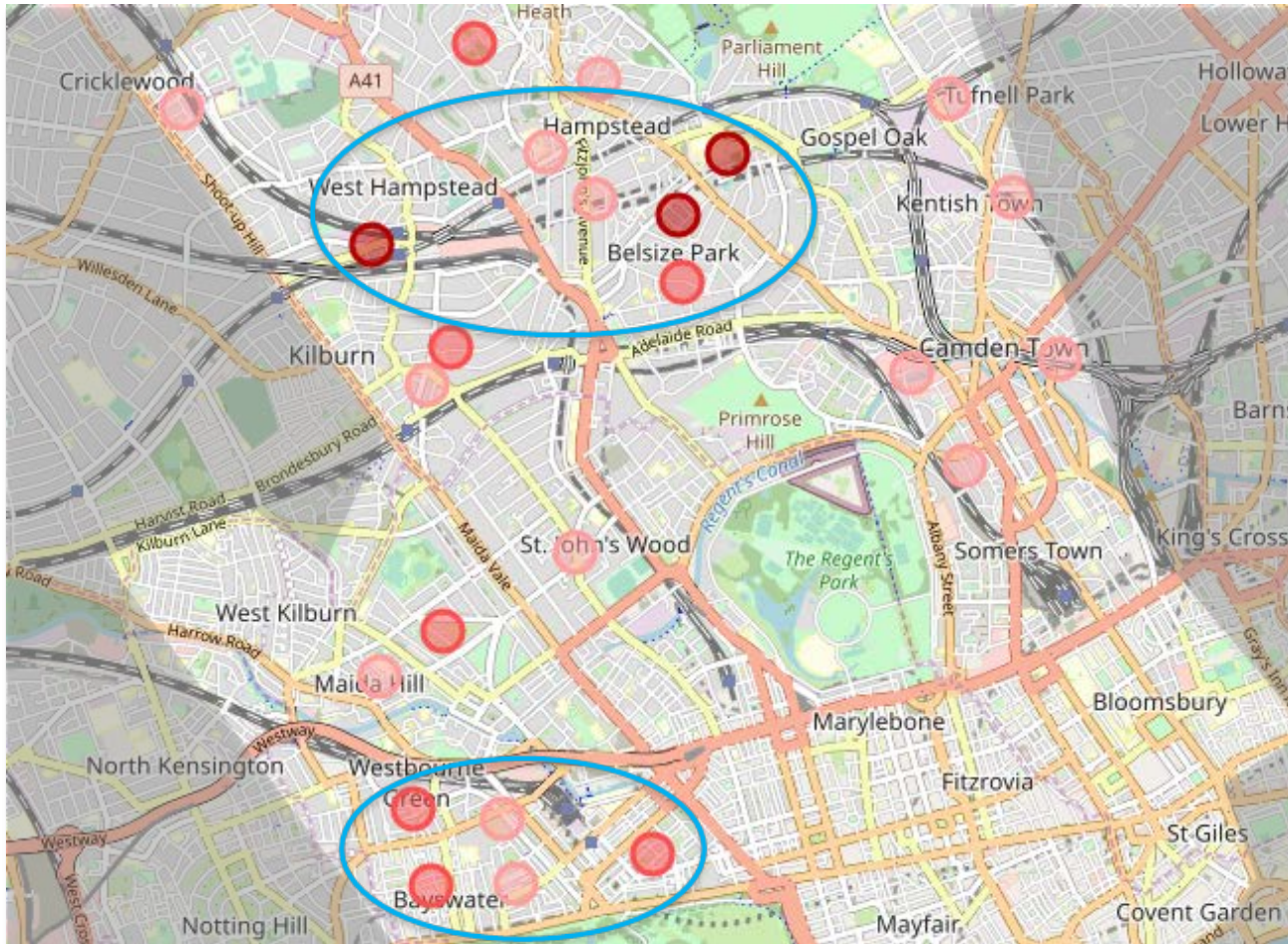


# Visualisation of rate of food expenditure growth



- If we plot the growth rates on the London map, we get a better view of our target geographies of Westminster and Camden.

# Geography of high spending postal codes



Key: 2019 takeaway expenditure

£5-7m

£7-9m

£9m+

- We next analyse expenditure by the more granular postal district.
- The Datastore provides data on Takeaway food spending.
- The postal districts with Takeaway spending over £5m are shown overlaid on the Westminster/Camden map.
- There appear to be clusters around West Hampstead/Belsize Park and Bayswater.

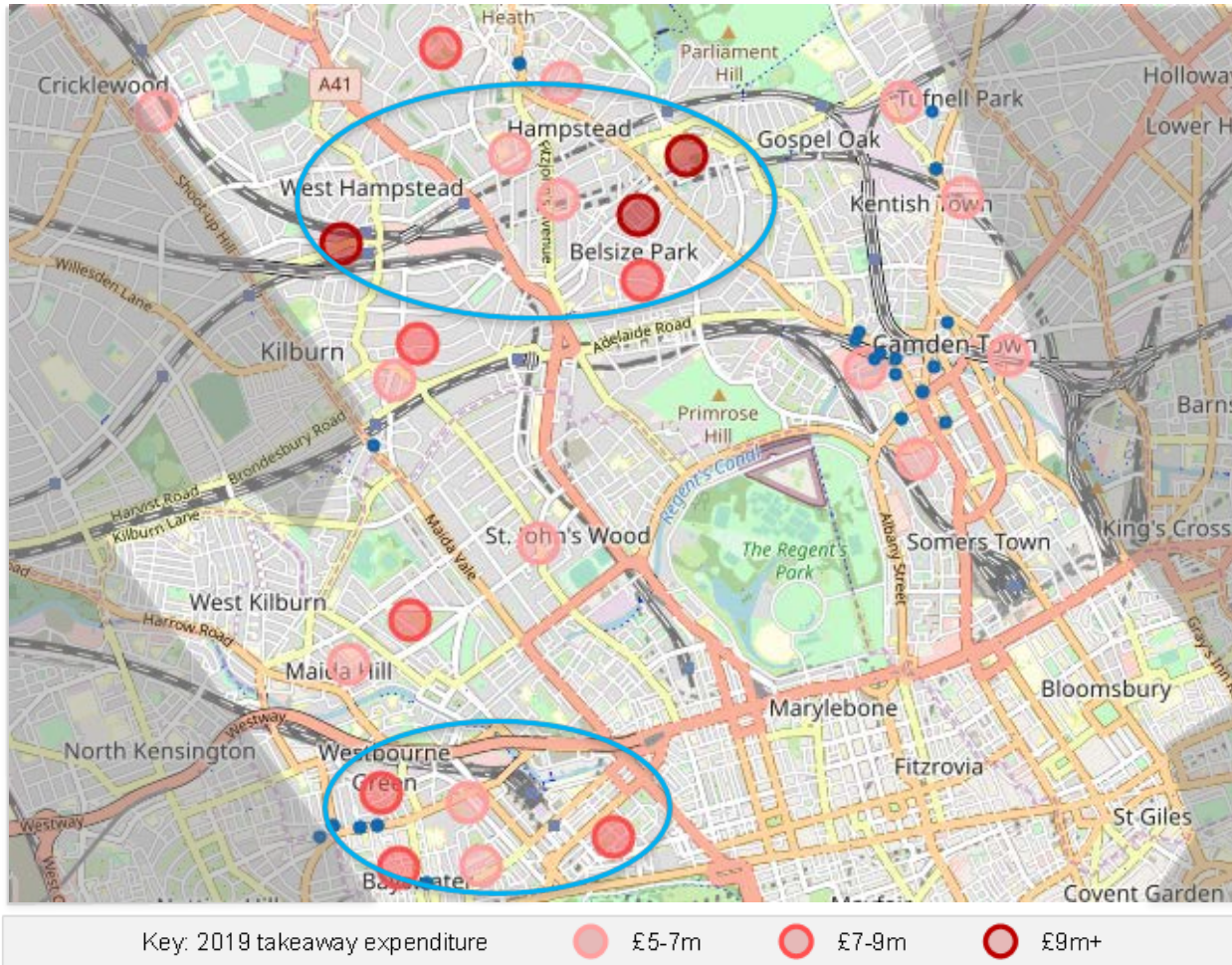


# Vegan & Vegetarian restaurants in target areas

Neighborhood	Neighborhood Latitude	Neighborhood Longitude	Venue	Venue Latitude	Venue Longitude
NW17	51.535875	-0.142984	Purezza	51.538154	-0.144345
NW17	51.535875	-0.142984	What The Pitta	51.537937	-0.140377
NW17	51.535875	-0.142984	Dou Dou Restaurant	51.539656	-0.142405
NW18	51.540880	-0.147668	Mildred's Camden	51.540560	-0.144939
NW18	51.540880	-0.147668	Young Vegans	51.541454	-0.146686
NW18	51.540880	-0.147668	Purezza	51.538154	-0.144345
NW18	51.540880	-0.147668	Hawraman Cafe Bar	51.542902	-0.148172
NW18	51.540880	-0.147668	Rudy's Dirty Vegan Diner	51.542488	-0.148512
NW18	51.540880	-0.147668	Dou Dou Restaurant	51.539656	-0.142405
NW18	51.540880	-0.147668	Campbell's Canal Café	51.541387	-0.144801
NW18	51.540880	-0.147668	VBurger	51.541721	-0.146278
NW19	51.541688	-0.134729	Buttercream Dreams	51.543477	-0.140240
NW19	51.541688	-0.134729	veg vegan	51.540951	-0.141377
NW31	51.556845	-0.174824	Bunny Yawn	51.557831	-0.178493
NW37	51.558728	-0.185528	Bunny Yawn	51.557831	-0.178493
NW51	51.555750	-0.144381	L'express	51.555248	-0.141580
NW51	51.555750	-0.144381	Funky Bean	51.552017	-0.141290
NW52	51.550444	-0.138863	Funky Bean	51.552017	-0.141290
NW64	51.540226	-0.189767	Happy Vegetarian	51.536638	-0.191597
SW1V2	51.491286	-0.136988	Veg As You Go	51.492111	-0.138528
W23	51.513262	-0.181896	Cafe Forty One	51.512266	-0.186687
W23	51.513262	-0.181896	Raw La Suite West	51.512228	-0.186997
W24	51.513150	-0.189393	Farmacy	51.515334	-0.192749
W24	51.513150	-0.189393	Redemption	51.515516	-0.195184
W24	51.513150	-0.189393	Planet Organic	51.515504	-0.191166
W25	51.517288	-0.190838	Farmacy	51.515334	-0.192749
W25	51.517288	-0.190838	Jusu Brothers	51.514804	-0.196389
W25	51.517288	-0.190838	Redemption	51.515516	-0.195184
W25	51.517288	-0.190838	Planet Organic	51.515504	-0.191166

- Finally, we pull data on vegan and vegetarian restaurant venues in the two boroughs from Foursquare.
- The list of 29 venues in the table left includes 5 duplicates, as the search is done for each of the relevant postal districts in the boroughs.
- However, the objective is to see where these venues are located relative to our target postal districts.

# Locations of Vegan & Vegetarian restaurants in target areas



- Plotting the existing restaurants from Foursquare on our Westminster/Camden map (as blue dots) shows they are clustered around Camden Town and Bayswater.
- Therefore, our Hampstead/Belsize Park cluster appears to be a good location for a new Vegan restaurant.

# Conclusion



- The initial analysis highlights Hampstead/Belsize Park as optimal locations for a new Vegan restaurant in terms of consumer spending on takeaways and demographics.
- As a next step, the area needs to be assessed in terms of the cost and practicalities of establishing such a business. These areas do have especially high real estate costs.
- Further primary market research also needs to be carried out on the local interest in vegan food in these areas before they are selected.
- The analysis set out in this presentation could be extended to other boroughs if these locations are found to be unsuitable or impractical