

# Welsh Towns

---

CAPSTONE PROJECT - THE  
BATTLE OF NEIGHBOURHOODS

# The Problem

---

A couple with young children is looking for a safe and quiet place to live. For their children they want a good state school and for the family a small, but vibrant town. They would like either to settle in that town or very close. They are flexible in regards to the location because they both work from home with only occasional business travels to a city. But where to start? Where are the good schools and which towns could be nice to live in?

# Data

List of resources:

- Localities with population:  
[https://en.wikipedia.org/wiki/List\\_of\\_localities\\_in\\_Wales\\_by\\_population](https://en.wikipedia.org/wiki/List_of_localities_in_Wales_by_population)
- Four Square (will be used with a free account):  
<https://foursquare.com/>
- List of schools in Wales including their 2019 rating:  
<https://gov.wales/sites/default/files/publications/2020-02/national-school-categorisation-system-support-categories-2019-v2.xlsx>
- Average house prices on government website:  
[http://publicdata.landregistry.gov.uk/market-trend-data/house-price-index-data/Average-prices-Property-Type-2020-04.csv?utm\\_medium=GOV.UK&utm\\_source=datadownload&utm\\_campaign=average\\_price\\_property\\_price&utm\\_term=9.30.19.08.20](http://publicdata.landregistry.gov.uk/market-trend-data/house-price-index-data/Average-prices-Property-Type-2020-04.csv?utm_medium=GOV.UK&utm_source=datadownload&utm_campaign=average_price_property_price&utm_term=9.30.19.08.20)
- Counties in Wales:  
<https://www.townscountiespostcodes.co.uk/counties-in-wales/>

# Solution

The cleaned list of localities will be geolocated and categorised using Four Square data and the K-Means model. All good and excellent secondary schools will be geolocated. The classification results and shown on a map will help to narrow down the search to the similar towns and villages only. Finally the average hoes price presentation can be used for the affordability check.

Welsh Towns with population  
between 2,000 and 20,000



# Data Wrangling: Schools

---

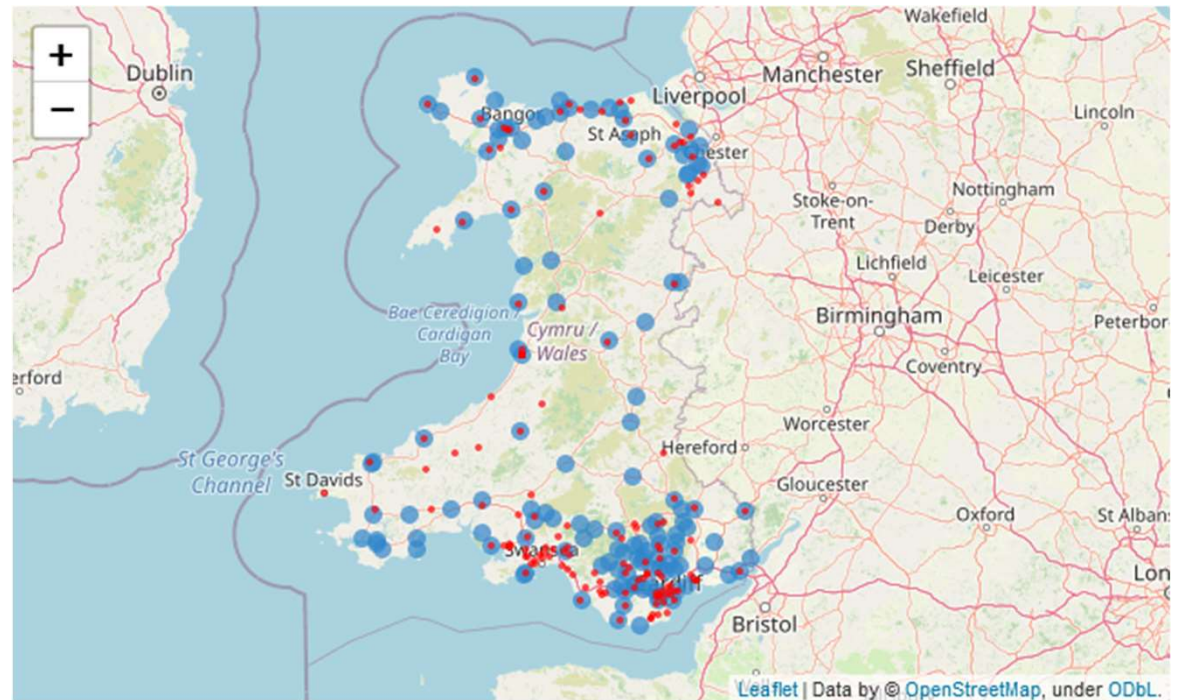
Colour Code

Rating

Green/Gwyrdd	Highly Effective
Yellow/Melyn	Effective
Amber/Oren	In Need of Improvement
Red/Coch	In Need of Greatest Improvement

# Data Wrangling: Towns & Schools

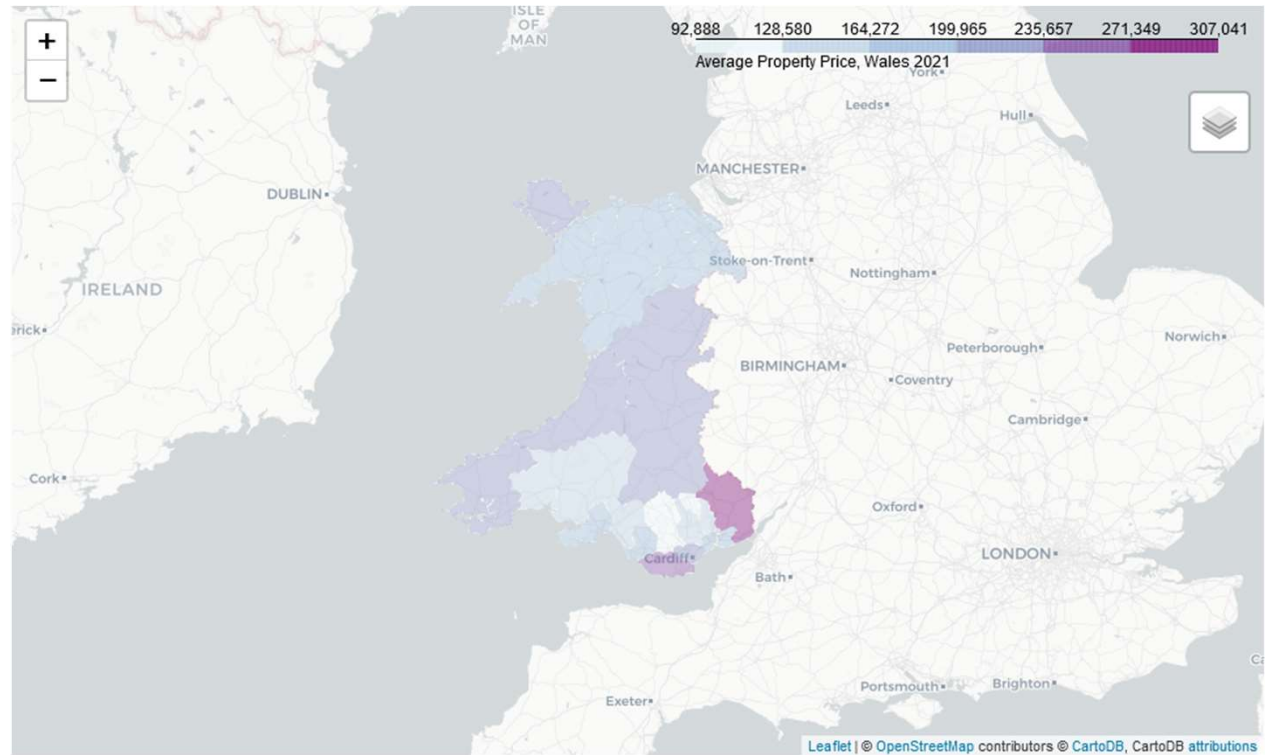
WELSH TOWNS WITH POPULATION  
BETWEEN 2,000 AND 20,000  
AND SCHOOLS RANKED 'GREEN'  
AND 'YELLOW'





# Data Wrangling: Property Price

AVERAGE PROPERTY  
PRICE IN WALES PER  
COUNTY (JAN 2021)





# Methodology: Schools

In the year 2019 there were 142 schools falling into one of the two top categories. The data is a geolocated list of schools ready for plotting on a map. 72 schools are rated as green and 70 are rated as yellow.

# Methodology: Property Prices

---

Result of method  
'describe' on the data-  
set

	Ave_price_2021
count	23.000000
mean	181,692.869565
std	45,429.742185
min	92,888.000000
25%	162,144.000000
50%	175,287.000000
75%	201,098.500000
max	307,041.000000

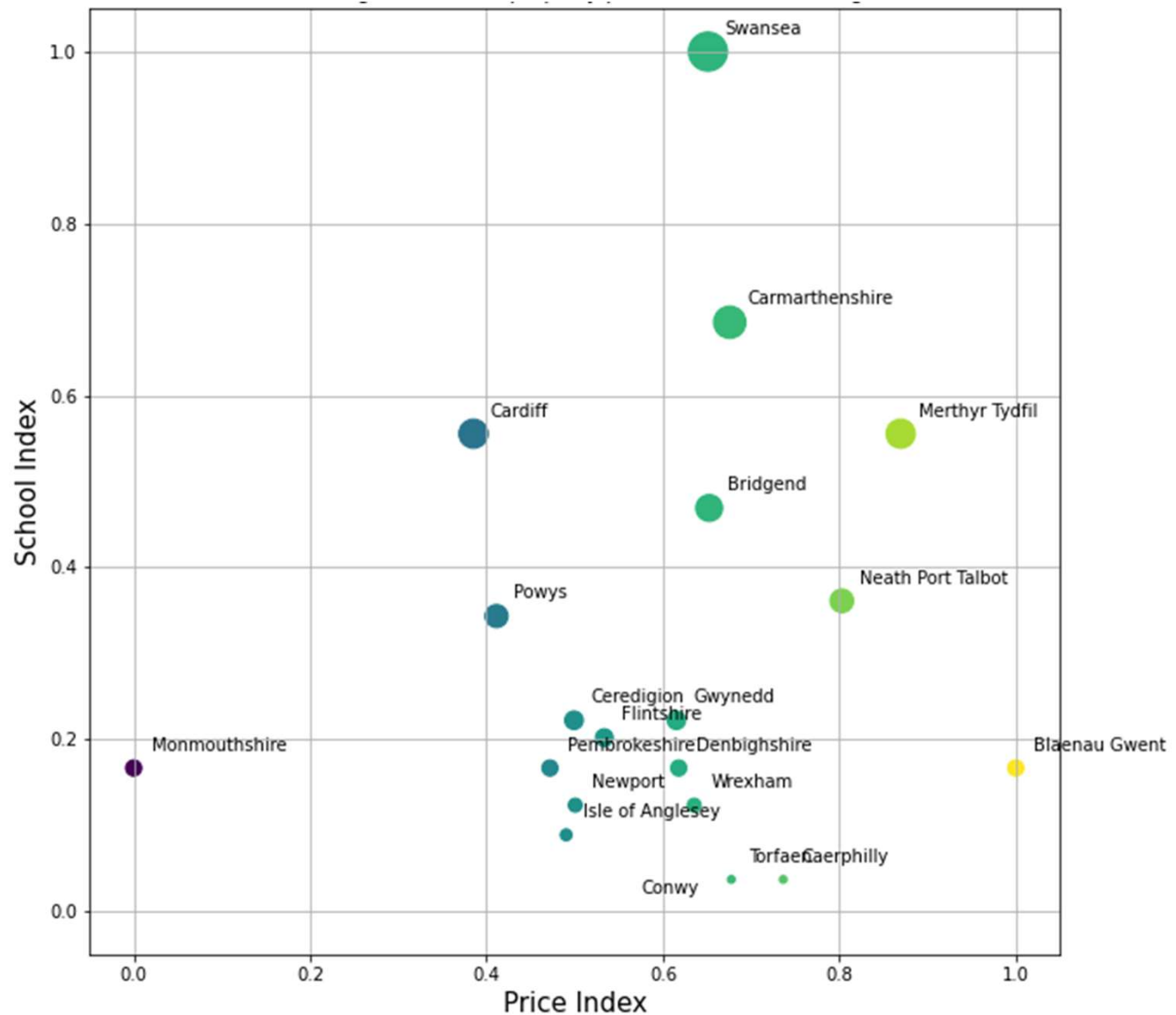
# Methodology: Property Prices

CORRELATION BETWEEN  
SECONDARY SCHOOL SUPPORT  
CATEGORIES AND AVERAGE  
PROPERTY PRICES PER COUNTY.



# Methodology: County Ranking

RANKING OF WELSH COUNTIES:  
PROPERTY PRICE AND 'GREEN'  
SCHOOL RATING



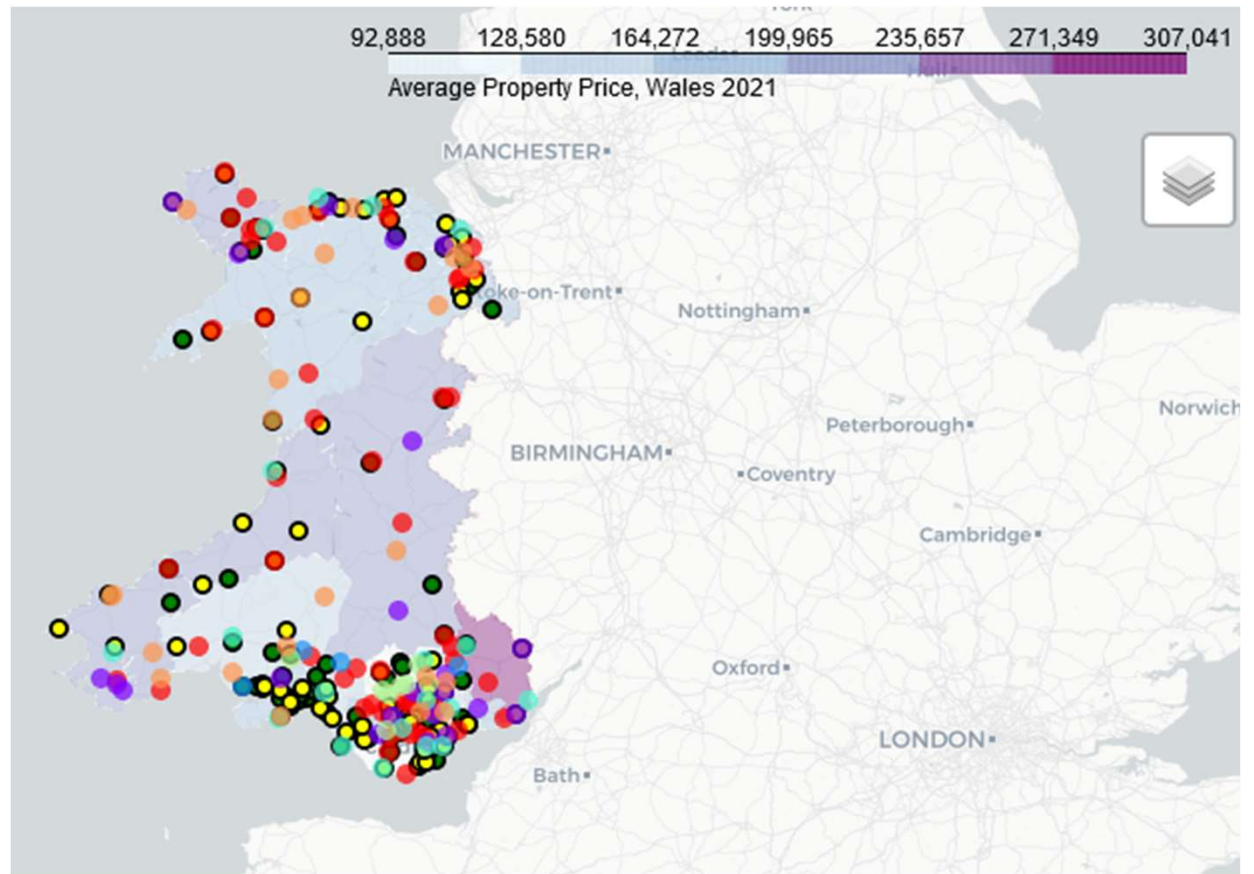
Pub	190	Beach	33	Ice Cream Shop	16
Hotel	120	Pizza Place	31	Bookstore	14
Grocery Store	119	Bar	30	Golf Course	14
Supermarket	118	Pharmacy	29	History Museum	14
Coffee Shop	88	Gastropub	27	Construction & Landscaping	13
Train Station	77	Furniture / Home Store	26	Stationery Store	13
Café	75	Indian Restaurant	21	Theater	12
Restaurant	50	Warehouse Store	20	Chinese Restaurant	11
Fast Food Restaurant	49	Fish & Chips Shop	19	Trail	11
Convenience Store	38	Castle	19	Boat or Ferry	11
Gym / Fitness Center	37	Sandwich Place	19	Tea Room	10
Clothing Store	36	Department Store	17	Electronics Store	10
Park	34	Harbor / Marina	16	Gym	10
Discount Store	34				

# Methodology: Towns

THE MOST COMMON  
VENUES IN THE  
SELECTED TOWNS

# Results

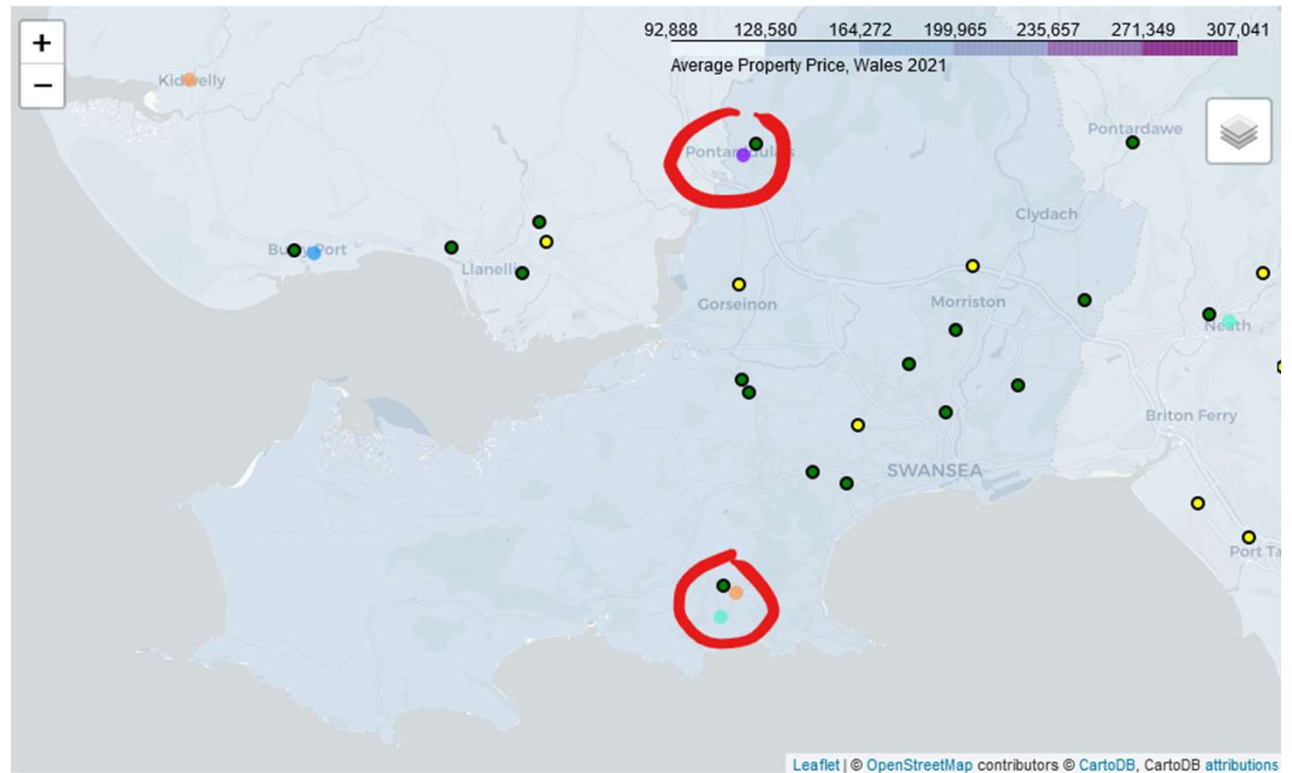
The aim of this analysis was to aid the couple to find a place to live based on certain criteria defined at the beginning of this report. Therefore the result is an interactive map showing the highest ranked schools as green and yellow circles (respectively of the 'highly effective' and 'effective' ranking) with black outline, average property price per county as a choropleth map with a blue – purple shading and clustered towns as circles in six colours.



# Results

---

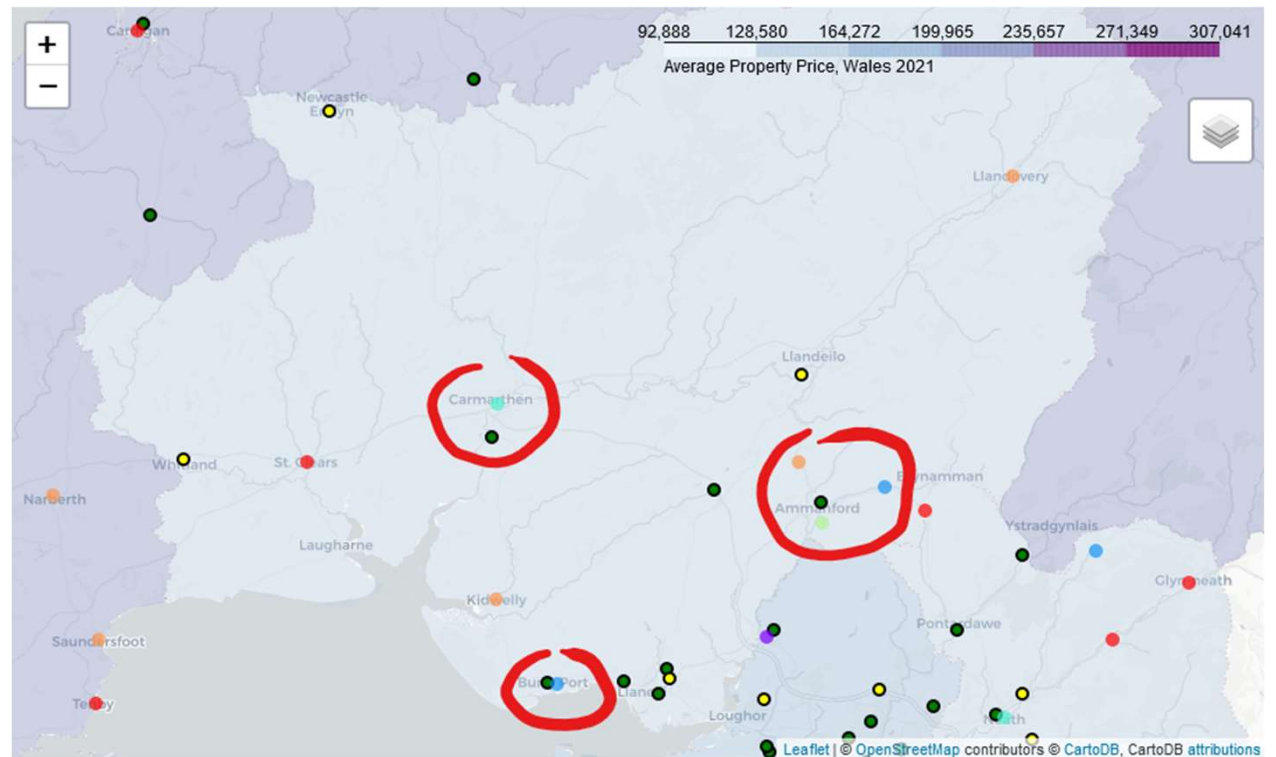
The largest proportion of green rated schools are in county of Swansea followe by Carmarthenshire. The closer look at the Swansea shows indeed a lot of excellent schools, but only three towns within the search criteria and all of a different character.





# Results

Carmarthenshire is much larger county with greater number of towns withing the search criteria. Some towns are located on the coast and some inland..



# Discussion and conclusion

---

Finding a place to live is a very personal choice and includes a lot of factors that go far beyond any statistics which was out of scope of this report. The available data indicates that a good start for a new home hunt could be the county of Swansea and Carmarthenshire as they offer good schools and towns in various categories to choose from.

Certainly, there are other interesting places to live in and worth exploring. For this reason, the interactive map should aid by having the twons clustered and schools rating plotted as well.