

Cover Page

Capstone Project - The Battle of Neighbourhoods: Welsh Towns

Applied Data Science Capstone
by IBM

Part of our IBM Data Science
Professional Certificate

Author: Rafal Radecki

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Contents

Instructions	3
The Problem	4
Discussion of the background	4
Data.....	5
Solution to the problem	5
Data Wrangling	6
Methodology	8
Results.....	12
Discussion	14
Conclusion	14
Appendices	15

Instructions

Now that you have been equipped with the skills and the tools to use location data to explore a geographical location, over the course of two weeks, you will have the opportunity to be as creative as you want and come up with an idea to leverage the Foursquare location data to explore or compare neighborhoods or cities of your choice or to come up with a problem that you can use the Foursquare location data to solve. If you cannot think of an idea or a problem, here are some ideas to get you started:

- In Module 3, we explored New York City and the city of Toronto and segmented and clustered their neighborhoods. Both cities are very diverse and are the financial capitals of their respective countries. One interesting idea would be to compare the neighborhoods of the two cities and determine how similar or dissimilar they are. Is New York City more like Toronto or Paris or some other multicultural city? I will leave it to you to refine this idea.
- In a city of your choice, if someone is looking to open a restaurant, where would you recommend that they open it? Similarly, if a contractor is trying to start their own business, where would you recommend that they setup their office?

These are just a couple of many ideas and problems that can be solved using location data in addition to other datasets. No matter what you decide to do, make sure to provide sufficient justification of why you think what you want to do or solve is important and why would a client or a group of people be interested in your project.

Review criteria

This capstone project will be graded by your peers. This capstone project is worth 70% of your total grade. The project will be completed over the course of 2 weeks. Week 1 submissions will be worth 30% whereas week 2 submissions will be worth 40% of your total grade.

For this week, you will be required to submit the following:

- A description of the problem and a discussion of the background. (15 marks)
- A description of the data and how it will be used to solve the problem. (15 marks)

For the second week, the final deliverables of the project will be:

- A link to your Notebook on your Github repository, showing your code. (15 marks)

2. A full report consisting of all of the following components (15 marks):

- Introduction where you discuss the business problem and who would be interested in this project.
- Data where you describe the data that will be used to solve the problem and the source of the data.
- Methodology section which represents the main component of the report where you discuss and describe any exploratory data analysis that you did, any inferential statistical testing that you performed, if any, and what machine learnings were used and why.
- Results section where you discuss the results.
- Discussion section where you discuss any observations you noted and any recommendations you can make based on the results.
- Conclusion section where you conclude the report.

3. Your choice of a presentation or blogpost. (10 marks)

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?

Discussion of the background

Looking at the couple's needs, they could potentially settle in a large area. Therefore they need help in narrowing down their search by finding good schools, classifying towns to highlight the ones that could suit them. Of course they will have to visit the place, but is it possible to visit hundreds of places around the country? Perhaps the classification will shed some light on the local amenities and help select similar places.

Moving to a new place involves a costly commitment in form of either a rent or purchase of a property. Can they afford a place to live? The house price data should reflect to some degree the rental cost, therefore an average house price should be helpful. A price for a house will vary greatly based on specific location, condition and many other factors, but an average price should indicate affordability and help with budgeting.

Data

The first task is to obtain a list of towns or localities in Wales. Wikipedia holds a list of 446 localities with their population in a single table. This source is reliable, will be easy to scrap, and filter appropriate size localities. Because the couple is looking for a quiet place yet with some vibrant community, hence it should not be a small village, nor a large town. This report focuses on localities with population ranging from 2,000 to 20,000 citizens.

Four Square database contains very comprehensive information about various type of venues, which could be used to identify similar towns based on composition of similar businesses.

Information about school performance could be downloaded from the internet as a structured dataset. All state schools in Wales are graded using a colour code, where excellent schools are 'Green/Gwyrdd' and good schools are 'Yellow/Melyn'. Although parents should read detailed information about the school and not focus only on the colour code, this goes beyond the scope of this project.

This report uses the latest secondary school database from year 2019, because of assumed age of children.

UK government website contains a structured data set of average house prices in xlsx format. This report uses the average price for a detached house per county in Wales on 01/04/2020 (the latest available). The data set contains historical data for the whole of UK, hence it has to be filtered using the most recent date and the list of counties in Wales.

List of resources:

- Localities with 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
- Counties in Wales:
<https://www.townscountiespostcodes.co.uk/counties-in-wales/>

Solution to the problem

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 house price presentation can be used for the affordability check.

Data Wrangling

Towns

The list of Welsh towns was cleaned, trimmed and geocoded using the 'geocoder' library and ArcGIS database, which is free. Only towns / localities with the population between 2,000 and 20,000 was used as previously described. The resulting data set has 132 towns represented as blue dots on the map in Figure 1.

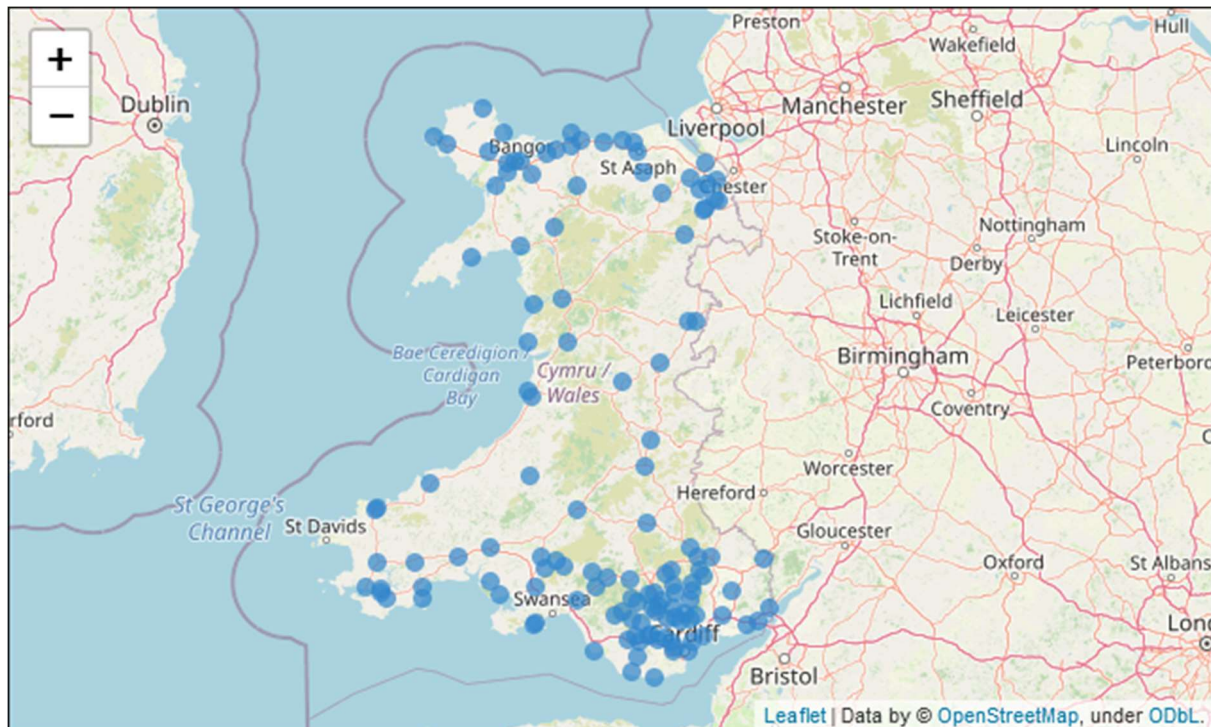


Figure 1 Welsh Towns with population between 2,000 and 20,000

Using the free account at Four Square the list of venues was obtained for all towns and converted to a pandas dataframe. The resulting data was saved as 'venues.csv' for further evaluation.

Schools

The Welsh Government websites publishes the school information in an Excel file: <https://gov.wales/sites/default/files/publications/2020-02/national-school-categorisation-system-support-categories-2019-v2.xlsx>. It is a large file with complex headings and multiple tabs. The most efficient way of loading the data is by pre-processing it in Ms Excel and saving the results as `schools.xlsx`.

The schools table provides 2019 information of secondary state schools in Wales with their rating:

Table 1 Estyn's school support categories

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

Primary and special schools have been removed and the headings simplified resulting in 205 entries.

To present schools on the map their addresses are obtained from the Welsh Government's website: <https://gov.wales/sites/default/files/publications/2021-02/address-list-schools-wales.ods>. The two tables were joined and the size reduced to few most important columns only: ('School_code', 'School_name', 'Local_authority', 'Rating', 'Postcode').

As the couple is interested in good schools only the table was further trimmed to list only green and yellow support category schools. The resulting data frame contained 142 schools was geolocated using 'geocoder' library based on each school's postcode. The resulting data frame was saved as 'schools_geo.csv' for further evaluation and added to the above map (see Figure 2).

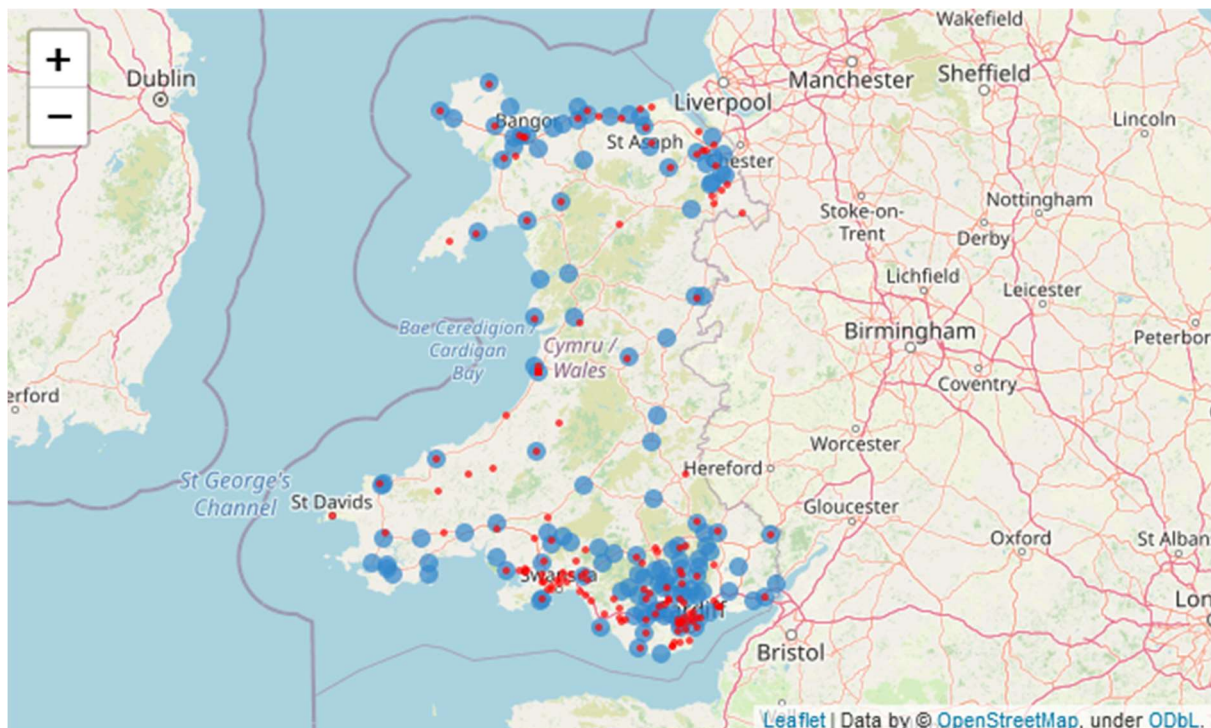


Figure 2 Towns and 'good' schools in Wales

Property Prices

House prices in Wales are average prices per count and to display them on the map a vector layer had to be added. The uk.gov website holds a geoJSON file of all UK counties here: http://geoportal1-ons.opendata.arcgis.com/datasets/687f346f5023410ba86615655ff33ca9_0_geojson

The average house prices are published also on the gov.uk website:

<https://www.gov.uk/government/statistics/uk-house-price-index-wales-january-2021/uk-house-price-index-wales-january-2021> in the csv format. However, the file is not in the default utf-8 encoding, therefore it requires a parameter encoding='ANSI' or engine='python'.

The combined result is shown on and can be used as the background map for presentation of the results.

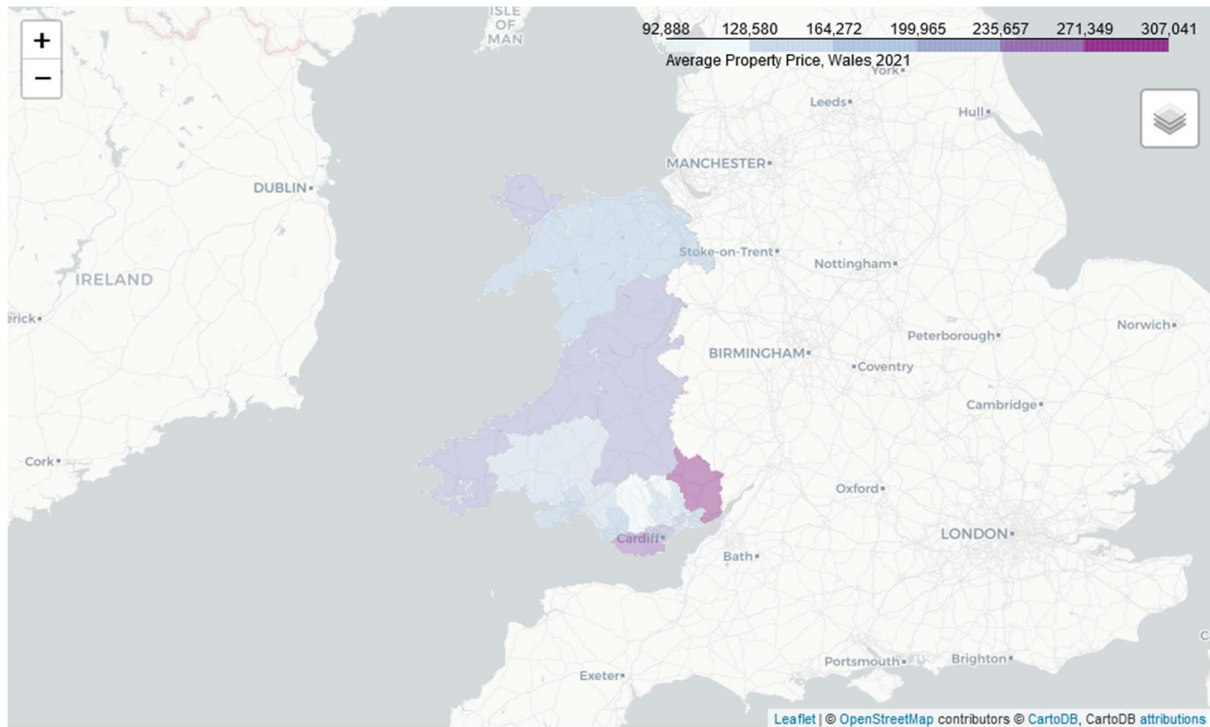


Figure 3 Average property price in Wales per County (Jan 2021)

Methodology

Methodology section which represents the main component of the report where you discuss and describe any exploratory data analysis that you did, any inferential statistical testing that you performed, if any, and what machine learnings were used and why.

The Data Wrangling section described how the data was collected and prepared for analysis. This section focuses on data exploration leading to the result.

Schools

The data frame saved as 'schools_geo.csv' resulted from data wrangling and is suitable for adding in the results. The couple is interested only in 'good' schools which fall into one of the two top support categories: yellow and green.

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.

Average Property Prices per County in Wales

The average property price in Wales is displayed as a blue to purple shading on the map to indicate a cost of obtaining a home. There are 23 counties in Wales and the prices vary significantly, see the method '.describe' result in Table 2.

Table 2 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

	Ave_price_2021
max	307,041.000000

Looking at the map it seems that the most expensive properties are in Monmouthshire and Vale of Glamorgan. Knowing the in UK school rating often influences the house price, we compared the schools in each county to the average property price.

Using the school data-set 'schools_rated.csv' we grouped the by the local authority and calculate the proportion of schools in each support category per total number of schools in the county. We then seek a correlation, which results are presented in Figure 4.

Pearson Correlation is the default method of the function 'corr' used in the notebook. It measures the linear dependence between two variables. Figure 4 shows the correlation between all numerical value, but we are interested only in the correlation between average property price and school ratings, which is the last row or the last column.

The resulting coefficient is a value between -1 and 1 inclusive, where:

- 1: Total positive linear correlation.
- 0: No linear correlation, the two variables most likely do not affect each other.
- -1: Total negative linear correlation.

In our case, the Pearson correlation resulted in values between -29 and 28, which means: weak correlation.

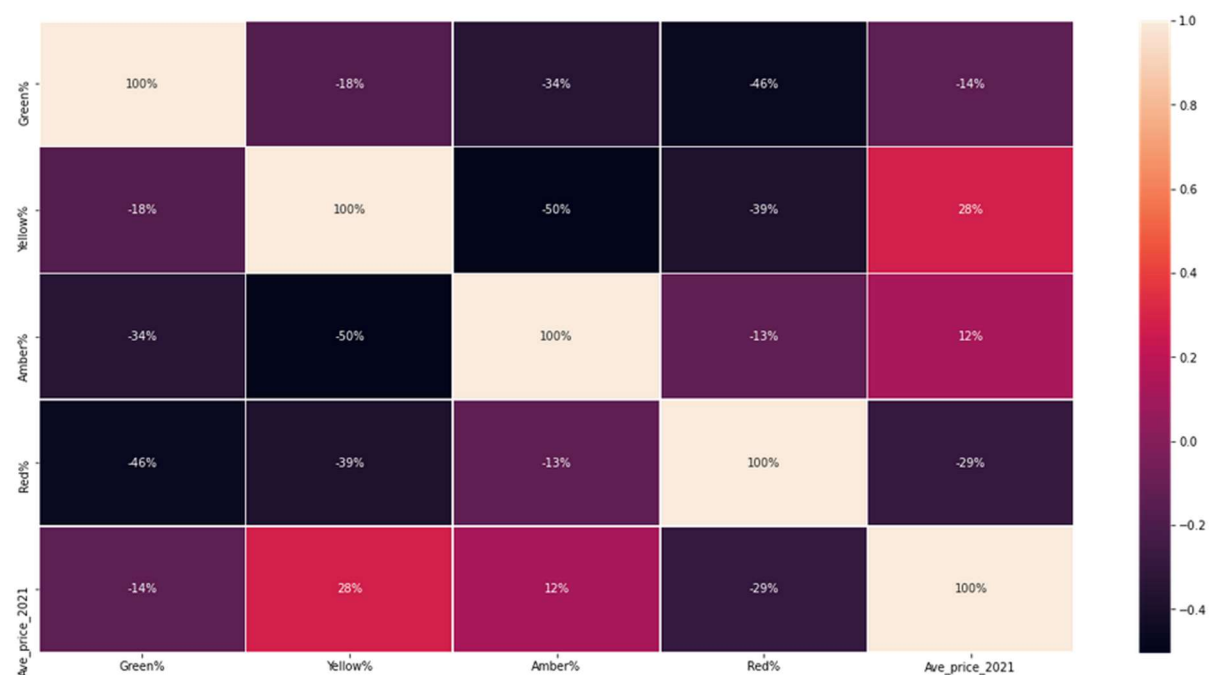


Figure 4 Correlation between secondary school support categories and average property prices per county.

If there is a poor relationship between the property price and school rating, which count offers the best value for money?

To picture the results clearly on Figure 5 two new columns were added to the data frame. One column converted the price values into a 0 – 1 range showing each county's average property price against the minimum and maximum difference, where 1 is the cheapest and 0 is the most expensive county. The same was done with the proportion of green schools within each county's school number, but here 1 means the highest proportion of schools ranked 'green' and '0' the lowest.

In this way, Figure 5 shows the best value for money in terms of excellent schools when the county has plotted the closet to the top right: both values going towards '1'. The full results are returned in Table 3.

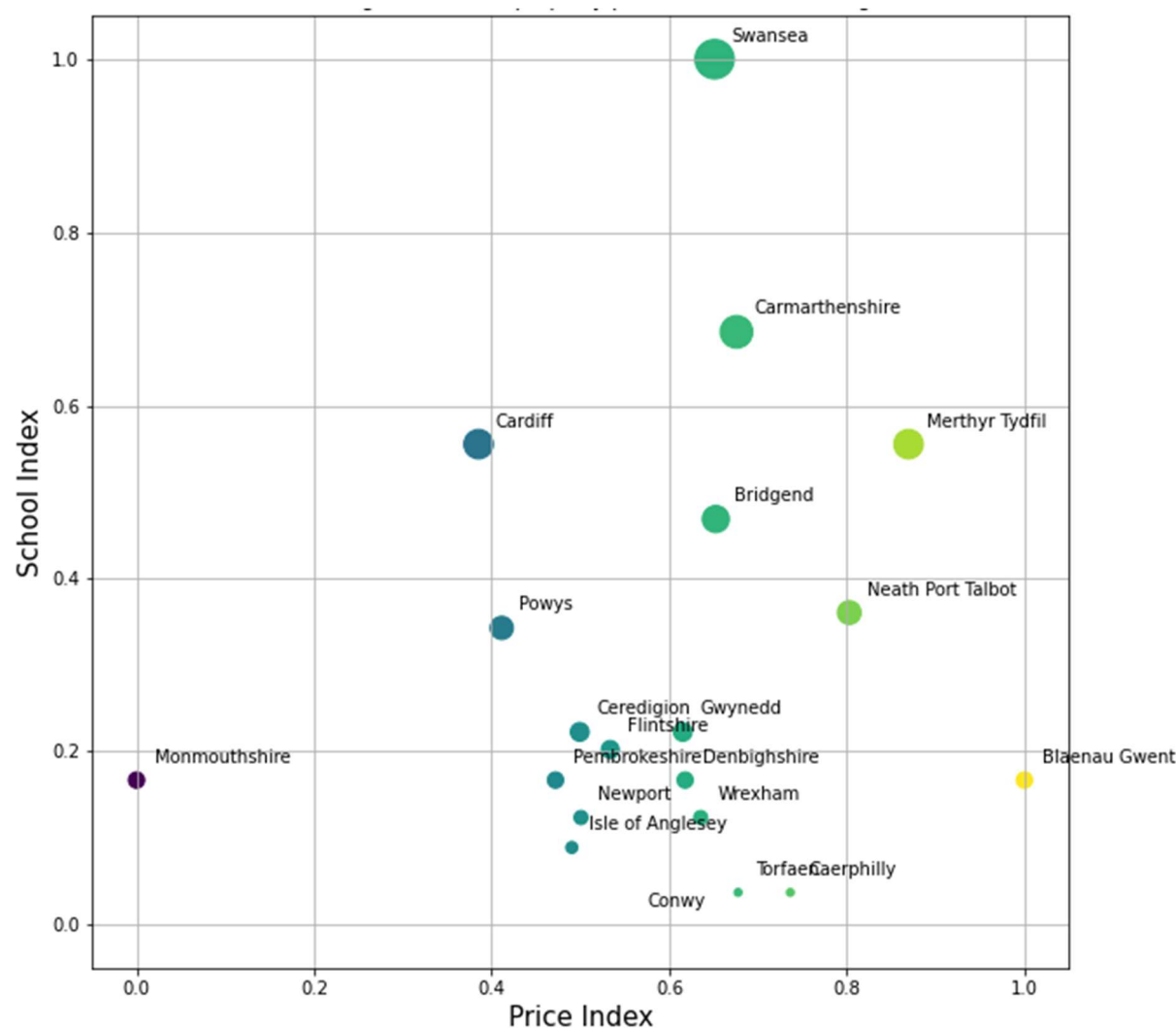


Figure 5 Ranking of Welsh Counties: property price and 'green' school rating

Table 3 Ranking of Counties: property price and school ranking

	Local_authority	Green%	Ave_price_2021	Price_Index	School_Index
0	Blaenau Gwent	0.250000	92888	1.000000	0.166667
1	Bridgend	0.444444	167325	0.652412	0.469136
2	Caerphilly	0.166667	149358	0.736310	0.037037
3	Cardiff	0.500000	224555	0.385173	0.555556
4	Carmarthenshire	0.583333	162338	0.675699	0.685185
5	Ceredigion	0.285714	200147	0.499148	0.222222
6	Conwy	0.142857	188111	0.555351	0.000000
7	Denbighshire	0.250000	174724	0.617862	0.166667
8	Flintshire	0.272727	192791	0.533497	0.202020
9	Gwynedd	0.285714	175287	0.615233	0.222222
10	Isle of Anglesey	0.200000	202050	0.490262	0.088889
11	Merthyr Tydfil	0.500000	120842	0.869467	0.555556
12	Monmouthshire	0.250000	307041	0.000000	0.166667
13	Neath Port Talbot	0.375000	135134	0.802730	0.361111
14	Newport	0.222222	199843	0.500567	0.123457
15	Pembrokeshire	0.250000	205988	0.471873	0.166667
16	Powys	0.363636	218959	0.411304	0.343434
17	Swansea	0.785714	167621	0.651030	1.000000

	Local_authority	Green%	Ave_price_2021	Price_Index	School_Index
18	Torfaen	0.166667	161950	0.677511	0.037037
19	Wrexham	0.222222	170972	0.635382	0.123457

Towns

There are many towns and villages in Wales, but the number was limited to 132 based on the population (between 2,000 and 20,000). The venues in each town were downloaded from Four Square as described in the Data Wrangling section. Four square returned 2002 venues with 205 unique categories – see Table 4 for the most common ones. Table 5 presents the number of venue categories in each of the 132 towns.

Table 4 The most common venues in the selected towns

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				

Table 5 Number of venues in each town

Town	Venue Category	Town	Venue Category	Town	Venue Category	Town	Venue Category
Abercynon	5	Crickhowell	5	Llangefni	7	Pontarddulais	5
Aberfan	6	Cwm	11	Llangollen	14	Pontycymer	3
Abergavenny	21	Cwmavon	4	Llanharry	6	Porthcawl	27
Abertillery	6	Cwmfelinfach/Ynysddu	5	Llanhilleth	6	Porthmadog	27
Abertridwr	7	Denbigh	6	Llanidloes	4	Pwllheli	10
Aberystwyth	73	Dolgellau	8	Llanrumney	64	Pyle	7
Amlwch	5	Ely, Cardiff	36	Llanrwst	5	Radyr	46
Bangor	72	Ferndale	4	Llantrisant	26	Resolven	4
Bargoed	6	Fishguard	10	Llantwit Major	8	Rhoose	10
Barmouth	16	Gilfach Goch	6	Llay	19	Rhuddlan	13
Bedwas	24	Gilwern	5	Machen	6	Rhymney	5
Benllech	7	Glanaman	3	Machynlleth	13	Risca	10
Bethesda	4	Glyn-neath	8	Maerdy	7	Ruthin	6

Town	Venue Category	Town	Venue Category	Town	Venue Category	Town	Venue Category
Bettws	5	Glyncoch	23	Marshfield	9	Saundersfoot	17
Blaenau Ffestiniog	12	Gresford	12	Menai Bridge	68	Seven Sisters	2
Blaenavon	5	Gwaun-Cae-Gurwen/Brynamman	10	Milford Haven	5	Southgate	65
Brecon	9	Haverfordwest	15	Mold	17	Splott	100
Broughton	32	Hirwaun	5	Monmouth	21	St Asaph	5
Bryn Pydew	31	Holyhead	18	Mountain Ash	6	St Clears	10
Brynna	5	Hope	11	Murton	10	Talbot Green	22
Builth Wells	6	Kidwelly	4	Narberth	8	Tanyfroon	10
Burry Port	7	Kinmel Bay/Abergele	8	Neath	26	Tenby	22
Caerleon	33	Lampeter	5	New Tredegar	5	Tonyrefail	4
Caernarfon	33	Leeswood	4	Newbridge, Caerphilly	5	Tredegar	13
Cardigan	8	Llanbradach	10	Newtown	11	Treharris	5
Carmarthen	40	Llandaff	74	Neyland	12	Tywyn	6
Chepstow	25	Llanddulas/Mynydd Marian	5	Ogmore Vale/Nantymodel	5	Undy	14
Cil-y-coed	15	Llandovery	11	Pembroke	9	Usk	4
Coedpoeth	5	Llandrindod Wells	4	Pembroke Dock	13	Valley	9
Connah's Quay	20	Llandudno	58	Pencoed	8	Welshpool	17
Conwy	52	Llandybie	4	Penmaenmawr	6	Y Felinheli	9
Cowbridge	11	Llanfair Pwllgwyngyll	15	Pentyrch	17	Ynysybwl	4
Creigiau	14	Llanfairfechan	4	Penyffordd	5	Ystrad Mynach	9

The most common venues in each town are presented in Table 6 in section Appendices.

The list of venues in each town and the population have been normalised and the K-Means model run to cluster the 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.

Figure 6 presents an overview of the results map and is a starting point for browsing.

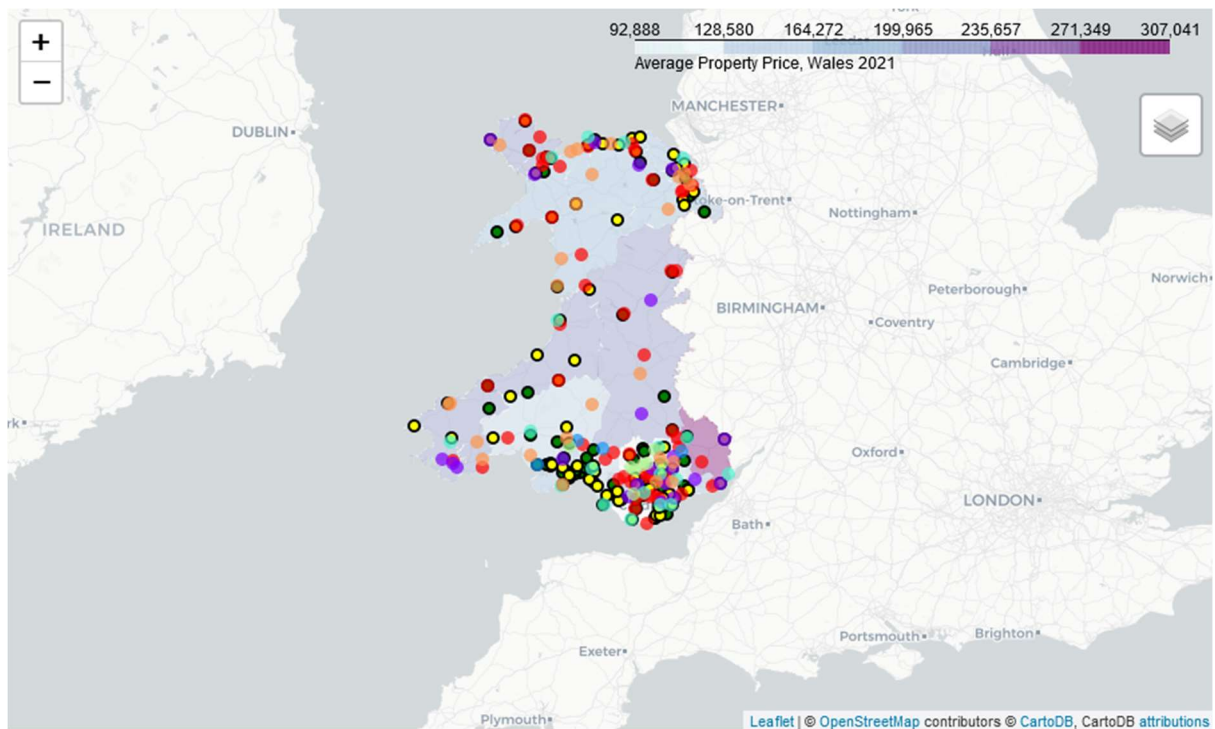


Figure 6 Results: Wales

Based on Figure 5, the largest proportion of green rated schools are in county of Swansea follow 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. Figure 7 presents the Swansea County in detail and the red cirke-marking highlight the towns near green-rated schools.

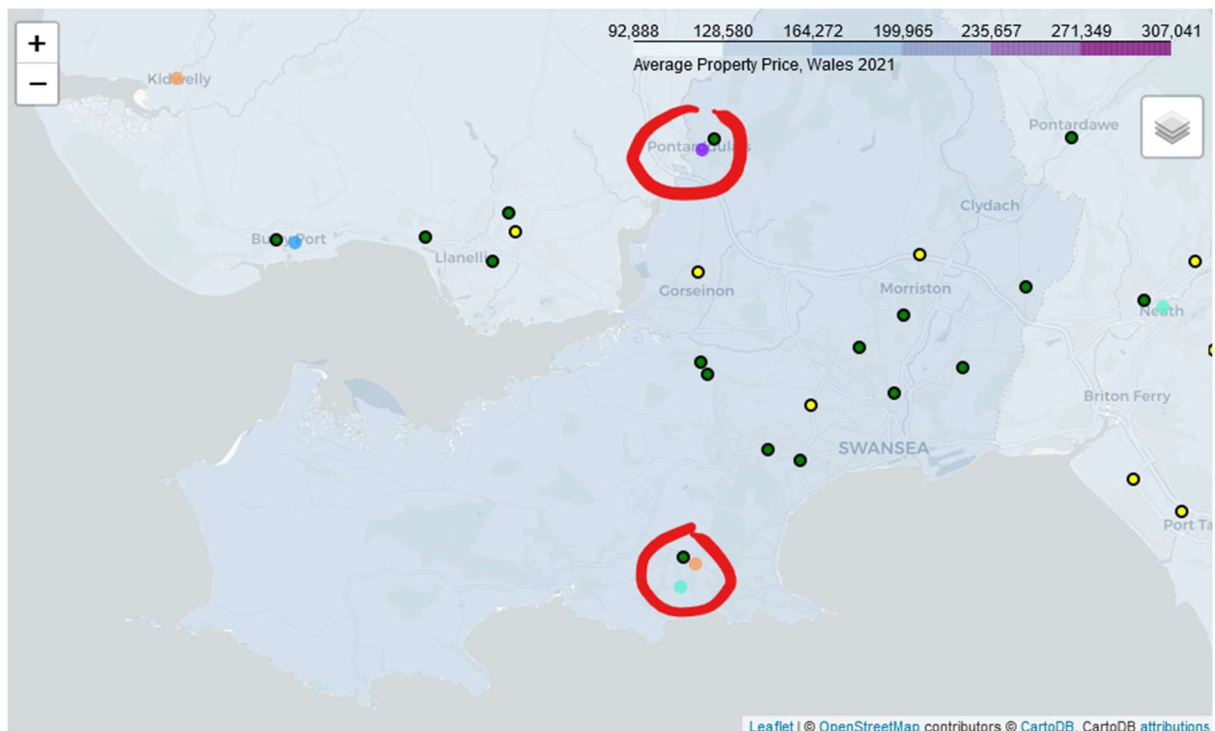


Figure 7 Results: Swansea

The second county in terms of highest proportion of good schools is Carmarthenshire. It is a much larger county with greater number of towns within the search criteria. Some towns

are located on the coast and some inland. The red hand-marks on Figure 8 highlight the prospect areas.

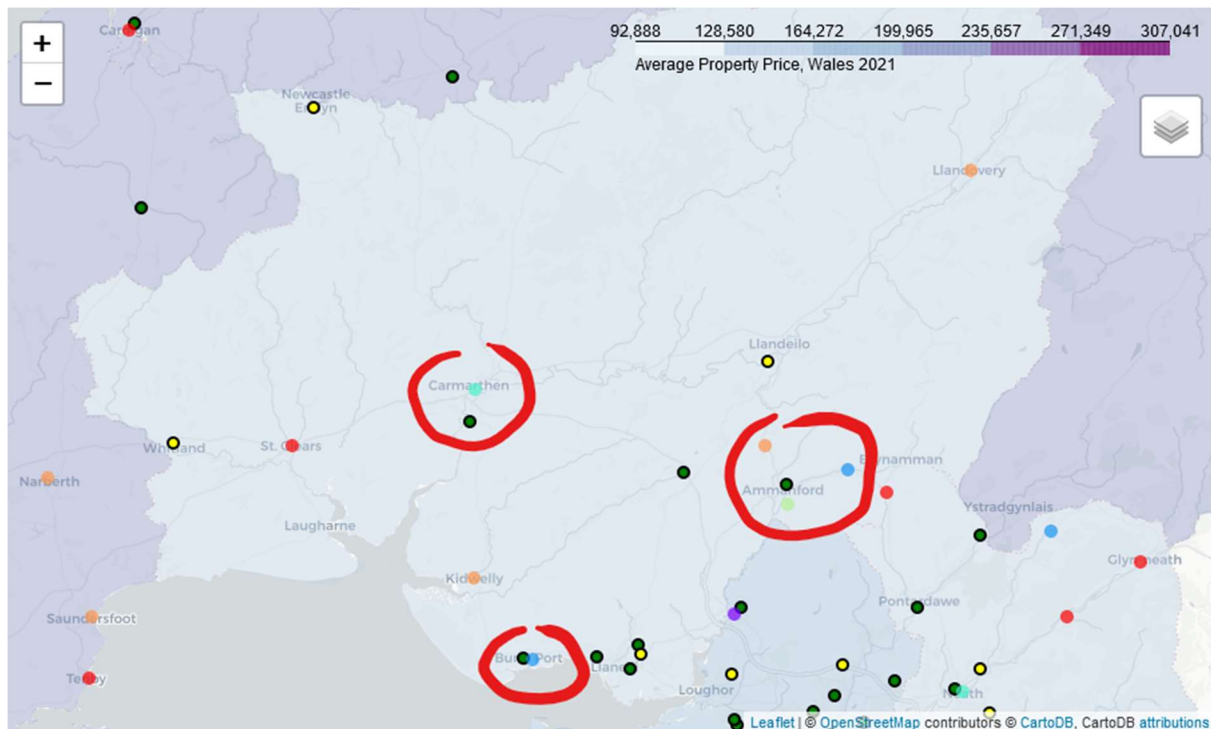


Figure 8 Results: Carmarthenshire

Discussion

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.

Conclusion

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

Appendices

Table 6 Most common venues in each town

TOWN	1ST MOST COMMON VENUE	2ND MOST COMMON VENUE	3RD MOST COMMON VENUE
ABERCYNON	Chinese Restaurant	Pub	Grocery Store
ABERFAN	Train Station	Platform	Bowling Green
ABERGAVENNY	Coffee Shop	Pub	Caf��
ABERTILLERY	Pub	Supermarket	Gym / Fitness Center
ABERTRIDWR	Bakery	Lighting Store	Restaurant
ABERYSTWYTH	Pub	Bar	Coffee Shop
AMLWCH	Mountain	Grocery Store	Gym Pool
BANGOR	Pub	Supermarket	Caf��
BARGOED	Train Station	Convenience Store	Supermarket
BARMOUTH	Train Station	Caf��	Hotel
BEDWAS	Pub	Discount Store	Supermarket
BENLLECH	Grocery Store	Beach	Pub
BETHESDA	Grocery Store	Bus Station	Bed & Breakfast
BETTWS	Supermarket	Train Station	Convenience Store
BLAENAU FFESTINIOG	Train Station	Caf��	Light Rail Station
BLAENAVON	History Museum	Neighborhood	Scenic Lookout
BRECON	Ice Cream Shop	Theater	Bar
BROUGHTON	Clothing Store	Pub	Supermarket
BRYN PYDEW	Hotel	Fast Food Restaurant	Pub
BRYNNA	Golf Course	English Restaurant	Grocery Store
BUILTH WELLS	Park	Grocery Store	Fast Food Restaurant
BURRY PORT	Construction & Landscaping	Golf Course	Grocery Store
CAERLEON	Pub	Hotel	Golf Course
CAERNARFON	Pub	Supermarket	Caf��
CARDIGAN	Pub	Campground	Stationery Store
CARMARTHEN	Clothing Store	Coffee Shop	English Restaurant
CHEPSTOW	Pub	Grocery Store	Pharmacy
CIL-Y-COED	Pub	Train Station	Supermarket
COEDPOETH	Chinese Restaurant	Grocery Store	Vineyard
CONNAH'S QUAY	Discount Store	Convenience Store	Fast Food Restaurant
CONWY	Pub	Hotel	Fast Food Restaurant
COWBRIDGE	Gastropub	Coffee Shop	Paintball Field
CREIGIAU	Hotel	Pub	Convenience Store
CRICKHOWELL	Pub	Hotel	Trail
CWM	Boat or Ferry	Grocery Store	Caf��
CWMAVON	Grocery Store	Construction & Landscaping	Neighborhood
CWMFELINFACH/YNYSDDU	Trail	Pub	Furniture / Home Store
DENBIGH	Supermarket	Discount Store	Castle
DOLGELLAU	Hotel	Restaurant	Grocery Store
ELY, CARDIFF	Grocery Store	Pub	Fast Food Restaurant
FERNDALE	Supermarket	Convenience Store	Grocery Store
FISHGUARD	Boat or Ferry	Grocery Store	Caf��
GILFACH GOCH	Grocery Store	Mountain	Bowling Alley
GILWERN	Mountain	Campground	Canal
GLANAMAN	Construction & Landscaping	Bar	Zoo

TOWN	1ST MOST COMMON VENUE	2ND MOST COMMON VENUE	3RD MOST COMMON VENUE
GLYN-NEATH	Grocery Store	Pub	Waterfall
GLYNCOCH	Pub	Pharmacy	Park
GRESFORD	Pub	Grocery Store	Restaurant
GWAUN-CAE-GURWEN/BRYNAMMAN HAVERFORDWEST	Pub	Indian Restaurant	Auto Workshop
	Pub	Supermarket	Hotel
HIRWAUN	Photography Lab	Grocery Store	Furniture / Home Store
HOLYHEAD	Supermarket	Boat or Ferry	Hotel
HOPE	Supermarket	Pub	Hotel
KIDWELLY	Castle	Farmers Market	Coffee Shop
KINMEL BAY/ABERGELE	Campground	Racetrack	Supermarket
LAMPETER	Supermarket	Grocery Store	Gas Station
LEESWOOD	Other Repair Shop	Grocery Store	Park
LLANBRADACH	Pub	Grocery Store	Hotel
LLANDAFF	Pub	Grocery Store	Indian Restaurant
LLANDDULAS/MYNYDD MARIAN	Diner	Historic Site	Asian Restaurant
LLANDOVERY	Fish & Chips Shop	Castle	Tea Room
LLANDRINDOD WELLS	Hotel	Supermarket	Organic Grocery
LLANDUDNO	Caf��	Coffee Shop	Hotel
LLANDYBIE	Gastropub	Construction & Landscaping	Train Station
LLANFAIR PWLLGWYNGYLL	Pub	Hotel	Zoo
LLANFAIRFECHAN	Waterfront	Caf��	Tunnel
LLANGFNI	Pub	Hotel	Discount Store
LLANGOLLEN	Pub	Caf��	Restaurant
LLANHARRY	Pub	Golf Course	Grocery Store
LLANHILLETH	Lake	Bakery	Convenience Store
LLANIDLOES	Pub	Grocery Store	Convenience Store
LLANRUMNEY	Supermarket	Furniture / Home Store	Gym / Fitness Center
LLANRWST	Caf��	Indian Restaurant	Bed & Breakfast
LLANTRISANT	Grocery Store	Clothing Store	Hotel
LLANTWIT MAJOR	Racetrack	Hotel	Gastropub
LLAY	Train Station	Gastropub	Pub
MACHEN	Trail	Gastropub	Grocery Store
MACHYNLLETH	Pub	Convenience Store	Caf��
MAERDY	Grocery Store	Train Station	Pub
MARSHFIELD	Pub	Pharmacy	Golf Course
MENAI BRIDGE	Pub	Supermarket	Coffee Shop
MILFORD HAVEN	Supermarket	Construction & Landscaping	Harbor / Marina
MOLD	Pub	Supermarket	Hotel
MONMOUTH	Pub	Coffee Shop	Supermarket
MOUNTAIN ASH	Train Station	Construction & Landscaping	Platform
MURTON	Caf��	Seafood Restaurant	Airport
NARBERTH	Pub	Deli / Bodega	Hotel
NEATH	Supermarket	Grocery Store	Fast Food Restaurant
NEW TREDEGAR	Park	Gym	Garden Center
NEWBRIDGE, CAERPHILLY	Pub	Train Station	Gym
NEWTOWN	Supermarket	Fast Food Restaurant	Pub
NEYLAND	Supermarket	Pub	Warehouse Store
OGMORE VALE/NANTYMOEL	Windmill	Indonesian Restaurant	Other Great Outdoors
PEMBROKE	Supermarket	English Restaurant	Warehouse Store

TOWN	1ST MOST COMMON VENUE	2ND MOST COMMON VENUE	3RD MOST COMMON VENUE
PEMBROKE DOCK	Supermarket	Pub	Grocery Store
PENCOED	Grocery Store	Hotel	Golf Course
PENMAENMAWR	Convenience Store	Beer Garden	Caf��
PENTYRCH	Pub	Coffee Shop	Train Station
PENYFFORDD	Discount Store	Pub	Supermarket
PONTARDDULAIS	Gastropub	Park	Cricket Ground
PONTYCYMER	Grocery Store	Gym	Business Service
PORTHCAWL	Beach	Caf��	Fish & Chips Shop
PORTHMADOG	Hotel	Caf��	Pub
PWLLHELI	Pub	Discount Store	Supermarket
PLYE	Seafood Restaurant	Pub	Surf Spot
RADYR	Pub	Grocery Store	Coffee Shop
RESOLVEN	Home Service	Pub	Convenience Store
RHOOSE	Hotel	Pub	Gastropub
RHUDDLAN	Supermarket	Hotel	Electronics Store
RHYMNEY	Train Station	Grocery Store	Convenience Store
RISCA	Supermarket	Fast Food Restaurant	Forest
RUTHIN	Discount Store	Pub	Grocery Store
SAUNDERSFOOT	Pub	Beach	Train Station
SEVEN SISTERS	Construction & Landscaping	Campground	Zoo
SOUTHGATE	Pub	Bar	Coffee Shop
SPLOTT	Coffee Shop	Caf��	Pub
ST ASAPH	Restaurant	Pub	Fried Chicken Joint
ST CLEARS	Coffee Shop	Bed & Breakfast	Hotel
TALBOT GREEN	Clothing Store	Pub	Hotel
TANYFRON	Supermarket	Grocery Store	Athletics & Sports
TENBY	Beach	Caf��	Pub
TONYREFAIL	Grocery Store	Gym Pool	Thai Restaurant
TREDEGAR	Supermarket	Pub	Fast Food Restaurant
TREHARRIS	Grocery Store	Gym / Fitness Center	Hotel
TYWYN	Train Station	Pub	Grocery Store
UNDY	Pub	Soccer Field	Nature Preserve
USK	Hotel	Gas Station	Garden Center
VALLEY	Beach	Hotel	Nature Preserve
WELSHPOOL	Supermarket	Department Store	Harbor / Marina
Y FELINHELI	Hotel	Brewery	Boat or Ferry
YNYSYBWL	Pharmacy	Pub	Gym / Fitness Center
YSTRAD MYNACH	Supermarket	Breakfast Spot	Park