Applied Data Science Capstone Project

Record of Protected Structures

Galway County , Ireland

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Introduction

A protected structure is a structure that the Planning Authority considers to be of special interest from an architectural, historical, archaeological, artistic, cultural, scientific, social or technical point of view. The Planning Authority in its Record of Protected Structures (RPS) includes details of protected structures. A Record of Protected Structures is the record included in a Development Plan, correct at the time of publication. It may be amended by the addition or deletion of entries independently of the Development Plan review process.

Ireland is beautiful green island in the North Atlantic Ocean. It is divided on Republic of Ireland and Northern Ireland which is part of United Kingdom. It is noted for a rich cultural heritage and tradition that is mainly linked to Gaelic language. Ireland is home for 6.4 million people. The island is considered 20-th largest in the world and encompasses 84.421 squared kilometers.

❖ It is home to numerous castles,

❖ Irish people speak English but also Irish which is Gaelic language,

❖ St. Patrick is worldwide known Irish saint,

❖ Shamrock ☘ and leprechauns are integral and well-known part of Irish tradition,

❖ Guinness beer best known Irish beer in world,

❖ It has oldest known pub 900 years old,

❖ Ireland has been inhabited approximately 7000 years,

are some of interesting facts about Ireland. [source](https://nationfacts.net/ireland-facts/)

Problem and Data acquisition

Apart from well -known and worldwide recognized cultural, natural and historical treasuries of Ireland, that bring every year a numerous tourists from around the world, there is a question how much of these are still hidden, or properly represented and offered as tourist attractions.

In this notebook I will try to give an answer to this question for Galway County.

I will go through Record of Protected Structures in Galway County Ireland in order to see how much of them are still in use and their impact on local toursm.

- Data that will be used in this project are acquired from [Ireland's open data portal](https://data.gov.ie/). It holds more than 10000 dataset's divided between different sectors.

- Data set used in this project contain information about protected structures in Galway County provided by Galway Count Council. Information such as name and type of structure, address, geocoordinates, date and identification number, current use, description, appraisal are ready to use.

- In order to extract and provide answer on actual treatment and inclusion in today tourist prospects of Galaway county they need to be slightly cleaned, and prepared for further use.

- This means that some columns for this project was not be needed some have to be combined with different sources such as Foursquare app.
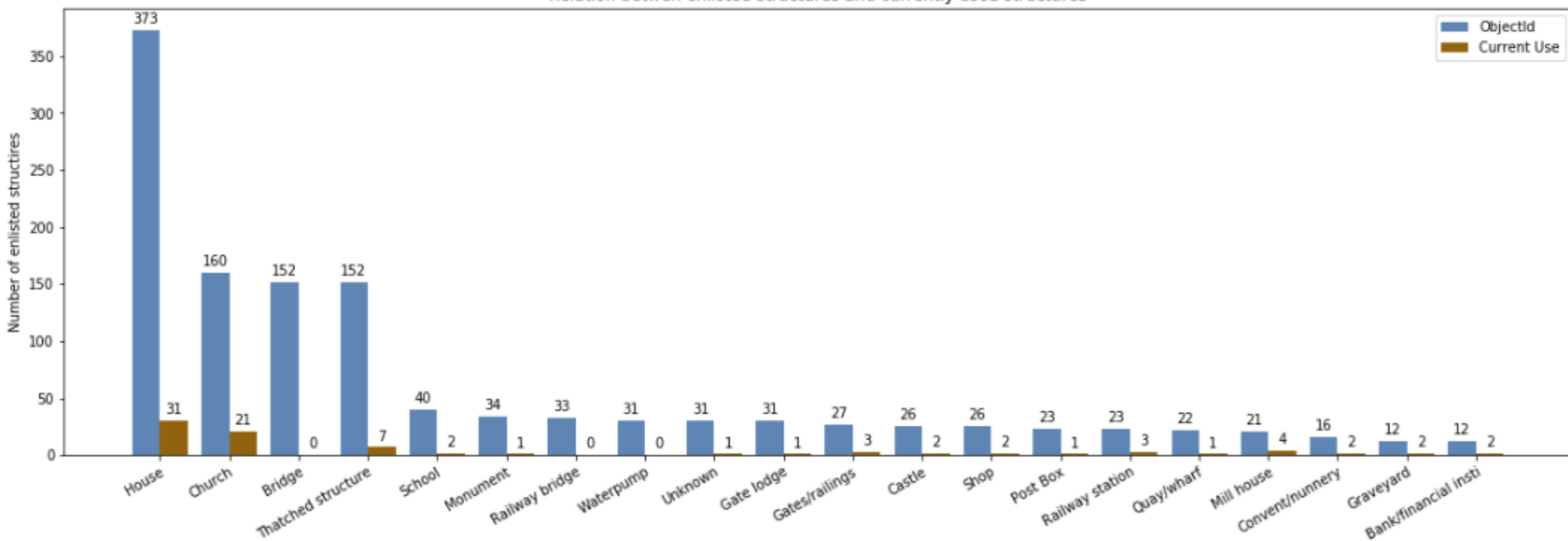
- Complete dataset can be find [here](https://data.gov.ie/dataset/record-of-protected-structures1)

Overview of Recorded Structures

Structures represented as Building Type

House	373
Church	160
Bridge	152
Thatched structure	152
School	40
Monument	34
Railway bridge	33
Unknown	31
Waterpump	31
Gate lodge	31

Structures currently in use

dwelling	20
house	9
place of worship	8
church	7
hotel	6
ruin	6
derelict	4
vacant	3
House and Shop	2
unused	2

Relation betwen enlisted structures and currently used structures
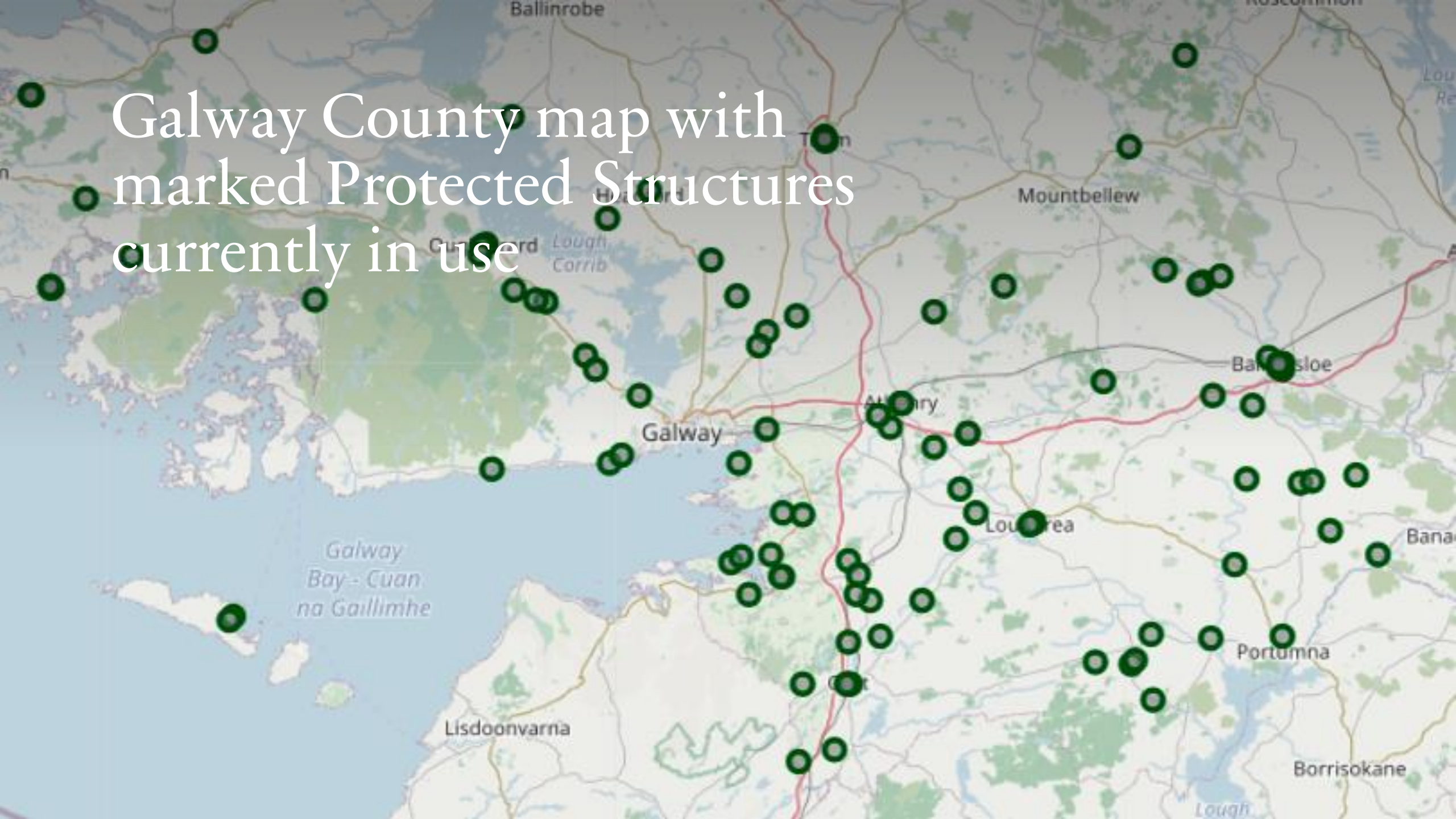
Number of enlisted structures

Methodology

- The main idea behind this project is to compare data from two different sources. One of them is dataset acquired from Record of protected structures and the second one will be acquired from Foursquare.

- Foursquare is worldwide recognized location platform that holds information about venues around the world. After visiting venues travelers leave information such as pictures, opinions, likes and dislikes or anything else they find informative for other users.

- The both sets should be cleand and prepared for further use aka comparison.

- In the first step the dataset about Protected structures should be cleaned and graphicly represented in order to make a clear picture about all registrated structures.

- In the second step data for given geocordinates that represent Galway County will be pulled out from Foursquare website prepared for further use - represented as dataframe, and than based on common address or geocoordinates comparison will be made.
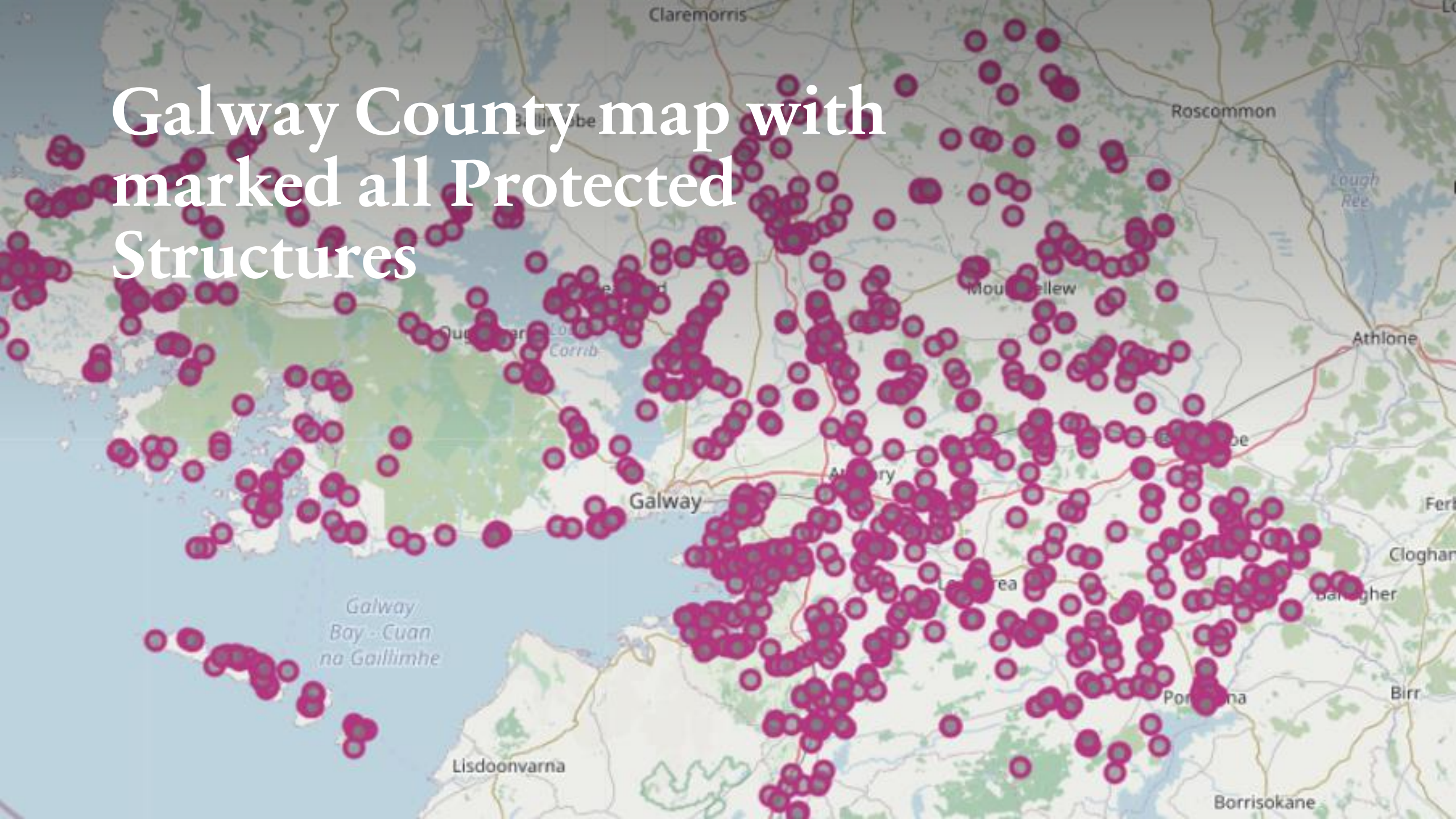
Galway County map with marked Protected Structures currently in use

Galway County map with marked all Protected Structures

Merging data from two different datasets

- After acquring data about venues from Foursquare platform and merging data from two different datasets, based on address or geocoordinates we came up with 5 common venues-Protected structures.

	name	categories	Address_x	cc	city	country
0	The Browne Doorway	Sculpture Garden	Eyre Sq	IE	Galway	Ireland
1	Eyre Square	Plaza	An Fhaiche Mhór	IE	Galway	Ireland
2	Esquires Coffee	Coffee Shop	11 Eyre Square	IE	Galway	Ireland
3	Meyrick Hotel	Hotel	Eyre Sq	IE	Galway	Ireland
4	McGettigan's	Gastropub	9-11 Prospect Hill	IE	Galway	Ireland

	Building_Name	Address_x	County	Building_Type	Description	Appraisal	Current_Use
0	Thatched Cottage	Ballycleary Kinvara Co. Galway	County Galway	Thatched structure	Detached 4 bay , single storey thatched cottage.	traditional roof and traditional setting.	dwelling
1	Windfield House.	Newbridge Ballinasloe Co Galway	County Galway	House	Detached 3 bay, single storey over basement ho...	House which retains original features in inter...	NaN
2	Cregg Mills	Corrandulla GALWAY	County Galway	Mill house	DECLARATION Five-bay four-storey mill building...	DECLARATION Although devoid of machinery the b...	dwelling
3	O'Dea's Hotel	Bride Street Loughrea Galway	County Galway	Hotel	DECLARATION 11/6/2014 Late 18th century 7 bay...	DECLARATION 11/6/2014 The building is of regi...	hotel
4	L O' Brien	Main Street Loughrea Galway	County Galway	House	Large 5 bay 3 storey late 18th century house	NaN	NaN

Results and Discussion

- After comparation has been made between two dataframes we finally have some numbers and they goes like this:

- 1514 Registrated protected structures according to dataset,

- 119 Registrated protected structures currently in use,

- 5 only amoung them are enlisted in Foursquare.

- Only 7.86% from those recorded are currently in use. And only 0.33% from all recorded structures are worldwide visible throughout the Foursquare platform.

- Although the number of currently used structures could be a higher than in dataset. The base for this assumption is grounded in results obtain by merging two datasets based on geocordinates. Windfield House and L O'Brien House under the Current_Use column have NaN value for which I have made assumption that it means that these datapoints represent currently non used structures. Yet these Houses have appeared on Foursquare platform in category for Hotels.

- Newertheless it's fairly small number if we take into the account complete list of Recorded structures, and as it could have been seen the list is quiet impressive.

- Reason for so small number of Protected Structures in some way included in tourism of Galway County can be numerus. And they ceartainly must be investigated in order to improve tourist offer of County.

Conclusion

- Although results have shown that fairly small number of structures enlisted as protected by Galway County Council, that as such possess certain historical, cultural, architectural value, are presented as Tourist attracion.

- Lots of at first sight, interesting buildings are not. Their inclusion in tourist offer of County can be benefitial from many aspects and one of main is Economic aspect for County, as well as budget for their preservation also educational character they can have for all that decide to see them.

- Those enlisted but not offered to a broader publicity represent potential that must be examined and included in Tourist prospects of County.

- With broader offer came more people who in that case usually love to stay a day or two more, who need to eat and if it's a local food than there is more job for local as well as farmers. And this is not where chain is closed because these people live traces - comments and pictures about places they have visited and draw another to follow them.