



Cross Border Title Report

WELSH BORDER DATA ANALYSIS

Summary of figures:

- 1093 titles straddle the border to various extents, due to genuine registrations or capture tolerances;
- **485 titles** straddle the border or exist in both England and Wales, significantly enough to exclude mapping or scale issues. Out of these:
 - 442 titles are freehold, 33 titles are leasehold and 10 titles are either cautions, rentcharges or unclassified (pending titles);
 - 136 titles are residential, 47 titles are commercial, 32 titles are mixed use and the remaining are either general land registration, water, mines and minerals or other interests on land;
 - 130 titles had a total of 141 transactions lodged against them (transfers, new leases and first registrations) in the last 5 financial years;
- 27.45% of the border length is identified as unregistered (not straddled nor adjoined by titles in the Welsh side) but, due to capturing methods or to titles being close to the border, significant limitations exist in the analysis.
- All spatial analysis was carried out using Index Polygons obtained from the NPD (July 16). Index Polygons are described [here](#).

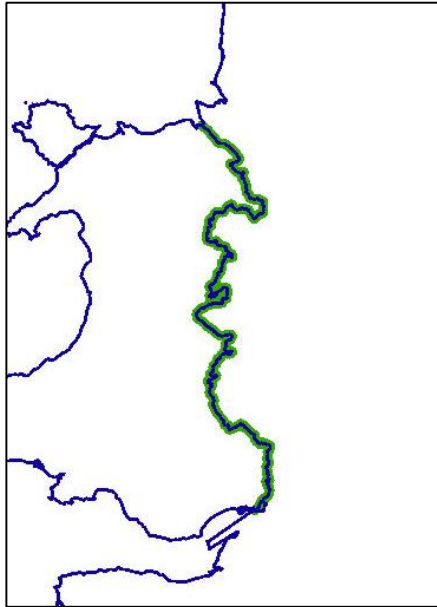
Report structure:

- Spatial analysis:
 - Border analysis;
 - Buffer analysis;
- Data analysis:
 - Tenure;
 - Property types;
 - Transactions;
- Unregistered land.

SPATIAL ANALYSIS

Border analysis

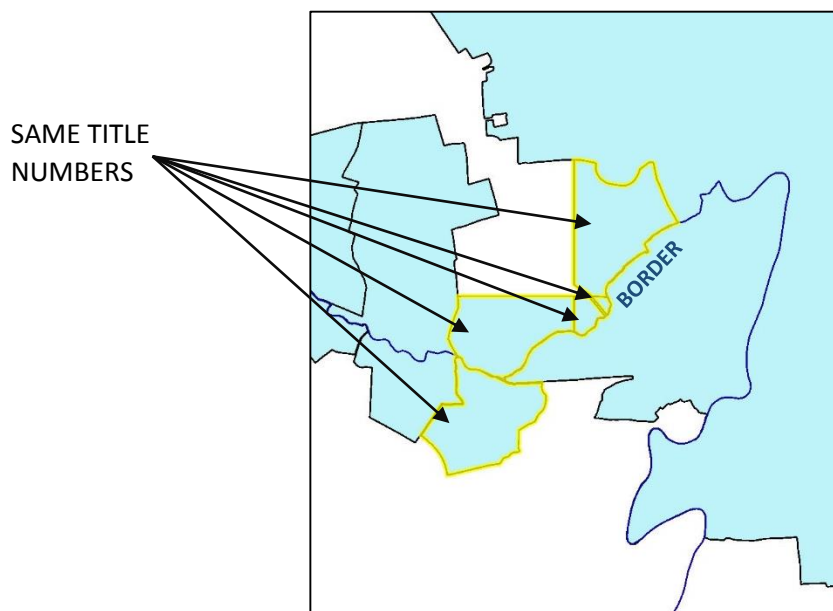
Administrative boundaries are mapped by the Ordnance Survey and delivered through the [Boundary-Line dataset](#). The country's dataset was reduced to the Wales-England border on which the analysis was performed.



The geographic distribution and the extent of titles were obtained from the [National Polygon Dataset](#) (extracted in July 2016). The spatial query to detect index polygons crossed by the border revealed a number of different situations.

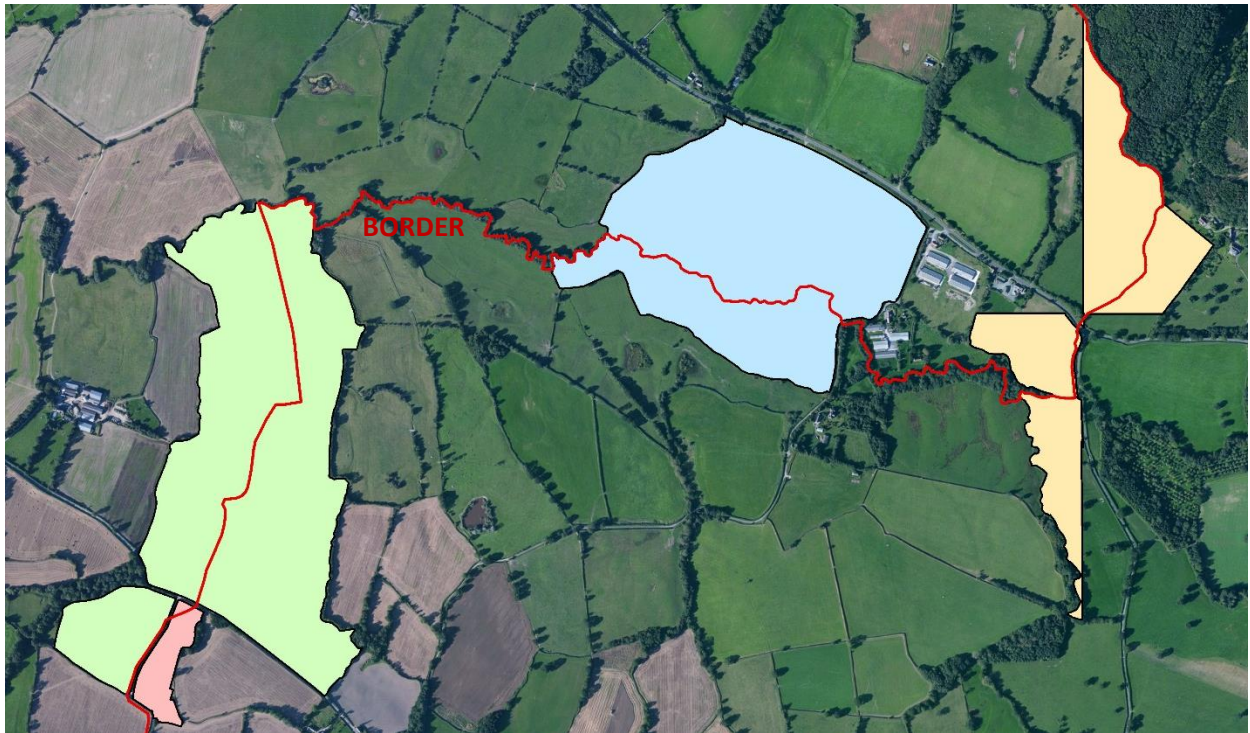
An initial total of **1382 polygons** was selected. These straddle the border to various extents and include duplicate entries for title numbers, due to multiple index polygons associated with them.

The polygons with duplicate TNs were aggregated into single entries and the dataset was eventually reduced to a more meaningful total of **1093 unique titles**.



All these titles straddle the border in the geographic representation but many of them do so to a very limited extent and/or due to limitations in the capture methods. Accordingly, a manual selection was carried out to further reduce the dataset. This was based on the interpretation of the actual relationship between the border and the index polygons and only those that significantly straddle the border were retained. This exercise has reduced the list to **463 titles**.

Example of titles straddling the border (RETAINED)



Example of titles adjoining or just crossing the border (EXCLUDED)



An additional query was run to find titles whose index polygons do not straddle the border but rather are split between England and Wales. **22 titles** were found. These were then added to the previous total of 463, to give a definitive list of cross border titles where a high level of confidence is given, amounting to **485 titles**.

Examples of titles split between England and Wales (RETAINED)



Buffer analysis

A second strand of the analysis was carried out to identify, in the list of 608 excluded titles (1093 - 485), those with a more meaningful relationship with the border. A buffer strip of an arbitrary 1 metre was created on each side of the border and all the polygons that exceeded it were retained. In this case, the final list would count a further **467 titles**, in addition to the previous 485 titles, hence a total of **952 titles**.

Examples of titles retained after the buffer analysis



DATA ANALYSIS

Tenure

Following are the statistics on tenure for the three most significant datasets previously produced, namely the lists of 485 and 952 titles. The classification is extracted from the Register.

	High Level (485 titles)	Mixed (952 titles)
Title Class		
Freehold	442	886
Leasehold	33	46
Caution	6	12
Rentcharge	1	1
Unclassified	3	7
Estate Interest		
Estate in land	475	929
Profit a prendre	9	22
Rentcharge	1	1

Property types

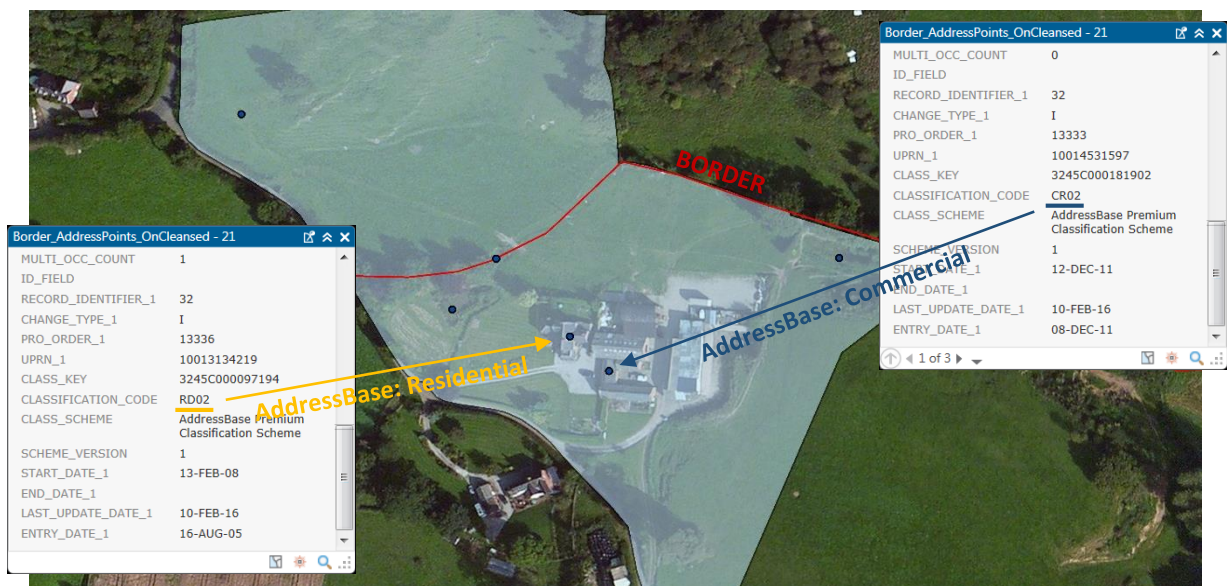
The following figures were produced by bringing together information from [AddressBase](#) (Ordnance Survey's addressing product which includes the classification of delivery addresses), the Register and the Mapping System. Some level of interpretation was required where no clear distinction could be made, since the Register does not provide any definition of residential or commercial. For instance, a common case is when a farm, with or without an associated residential address, falls within agricultural land and the Mapping System confirms that they are registered under the same title. Some clarifications were obtained from the B Register, in which the proprietor's address matching the property's address suggests the presence of a residential property. General land is here defined as property that do not include, in any part of its extension, either a residential or a commercial property, but it can be agricultural land used for commercial purposes or woodland.

This analysis was limited to the 485 titles that positively straddle the border (but it could be extended to the whole dataset if there is value in doing so). The titles were classified as Residential, Commercial, Residential/Commercial (Mixed Use), Land (General), Water, Mines and Minerals and Other interests (Profits a prendre, Cautions and Rentcharges).

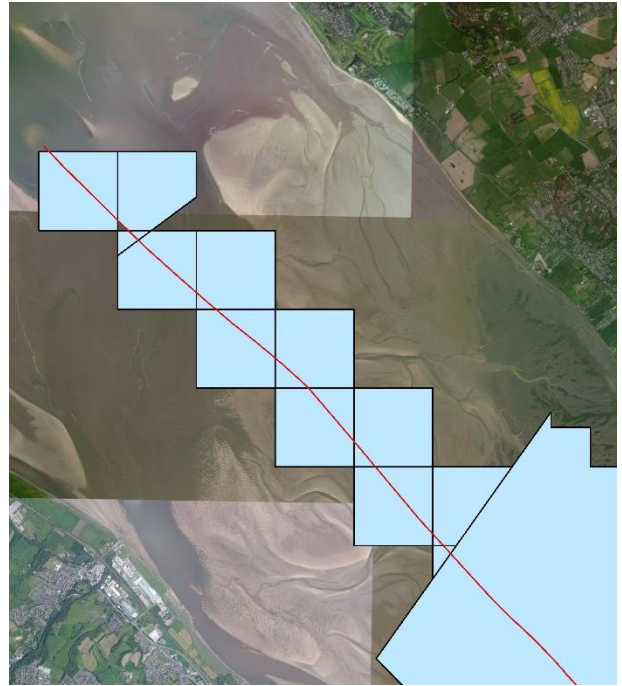
Types	Number of titles
Residential	136
Commercial	47
Residential / Commercial (Mixed Use)	32
Land (General)	219
Water	32
Mines and Minerals	3
Other interests	16

Following this analysis, the identified water titles could possibly be filtered out of the list, leaving a total of **453 titles**.

Example of a mixed use title mapped across different information systems



Examples of water titles in the Severn (left) and the Dee (right)



Transactions

Transfers (Value and No Value), New Leases and First Registrations were considered for the last 5 financial years only, starting from 01 April 2011. Applications that were initially lodged before this date, but whose mark off dates are logged after 01 April 2011, are included. The maximum number of transactions that any title had in this period of time was 3, with a few having 2 and most of them having just 1.

		High Level (485 titles)	Mixed (952 titles)
Total number of transactions		141	282
Transfers		69	135
	Value	45	99
	No Value	24	36
First Registrations		61	134
New Leases		11	13
Number of titles affected at least once		130	264
	Titles with 3 transactions	2	2
	Titles with 2 transactions	7	14

Unregistered Land Analysis

In order to find a figure for unregistered land along the border, an approach similar to the previous was adopted. Situations like unregistered roads and rivers crossing the border or very large unregistered portions of land make it difficult to determine exactly the extent of unregistered area. Although an arbitrary area buffer could be created on the border (10m? 50m? 500m?), it was instead chosen to measure the length of “unregistered border”: this was defined as the segments of the border where no title (or, more precisely, no index polygon) touches nor straddles it on the Welsh side. In this case, no difference was made between adjoining and straddling unregistered land.

The first measure showed a total of about 35% of unregistered border. Although large bits of genuine unregistered land along the border do exist, a number of caveats must be considered:

1. On a significant number of cases, the border follows unregistered river courses but land is actually registered just up to the riverbank;
2. Due to capturing tolerances, index polygons are often mapped with a narrow strip of land between them and the border but they are actually meant to go up to the border;
3. Again, due to capturing tolerances and as seen before, index polygons in England can straddle to Wales when they are not meant to, distorting the final value;
4. Capturing methods do not agree with each other, therefore the way the Ordnance Survey has vectorised the border does not follow the same rules as the mapping of index polygons by LR;

These issues were partially accounted for by creating a buffer of 10 metres along the border and considering registered the bits where a segment of land could be found within this range. This is not a definitive solution, especially due to the arbitrary nature of the 10m buffer. As things stand, the figure is still a questionable **27.45% of unregistered border**.

Example of solving an issue with a buffer

