Anti-Fracking Protest, England, 2011-2019: Data and Variable Descriptors

**Data Overview and Collection Notes**

This data contains information about the number of ‘conventional’ and ‘non-conventional’ protest events (defined below) during the anti-fracking campaigns in England, by year and county. Years cover the campaign period from its beginning in 2011 until the nationwide moratorium announced by the UK Government in 2019, with protest events from October 2011 until March 2019 captured. The counties represent three different contexts in which community-based mobilisation against fracking was seen; namely, Lancashire alongside North and South Yorkshire. Numerous other variables are provided, including socio-economic and industry-specific data. UK-level data is also included and the variables represent a mix of data forms.

The data provides an important window into the English anti-fracking campaigns that were community-led, inclusive of surrounding contextual factors. It is of interest for studies of this timeframe, industry and mobilisation both as a standalone dataset and for complementary use alongside other datasets. The dataset lends itself to comparative, time-series cross-sectional analyses at the intersection between local socio-political and economic contexts, and community-based anti-fracking mobilisation.

Many variables in the dataset are original. Economic indicators for specific English regions are reproduced under Open Government Licence from the UK’s Office for National Statistics. The event count data that forms a core element to this dataset was collected through a protest event analysis of actions listed on two online fracking and activist-specific websites by county and year (for details, see Garland et al. 2023). Protest events were categorised as ‘conventional’, involving procedural (litigation, petitions) and awareness-raising (leafletting, presentations) events, and ‘non-conventional’, denoting demonstrations (marches), camps (site occupations) and direct action (following Earl et al. 2003; Garland et al. 2023; Koopmans and Rucht, 2002).

The data is therefore organised according to conventional protest events (*n*=383), non-conventional actions (*n*=167) and county-years (*n*=27).

Limitations stemming from the original data collection strategy include the underreporting of direct action events that were not commonly advertised in advance of their occurrence. Efforts to compensate for this were undertaken by Garland et al. (2023) through consulting local newspapers and community group websites.

**Variable Descriptions**

The following table provides information about the organisation of the data, including variables that are present and their respective values. It further states the variable labels and codes that are used for the Stata (.dta) data file.

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| --- | --- | --- | --- | --- |
| **Variable** | **Stata Label** | **Data Type** | **Description** | **Values** |
| County | county | Nominal (String) | Case county. | Lancashire; North Yorkshire; South Yorkshire |
| Year | year | Ordinal (String). | Year. | 2011; 2012; 2013; 2014; 2015; 2016; 2017; 2018; 2019 |
| Conventional Protest Event1 | convprot | Continuous (Numeric) | Number of conventional protest events (procedural, awareness-raising). | 0-356 |
| Non-Conventional Protest Event1 | nonconvprot | Continuous (Numeric) | Number of non-conventional protest events (demonstrations, camps, direct action). | 0-97 |
| Local Political Opportunity Structure Openness (Planning) | lposop | Binary (Numeric) | Whether the planning process at the local government level is open or closed for public consultation. | 0: Closed  1: Open  9: Invalid |
| National Political Opportunity Structure Openness (General) | nposop | Binary (Numeric) | Whether the national (UK) government is open or closed to debate on fracking. | 0: Closed  1: Open |
| Conservative Local Authority | concouncil | Binary (Numeric) | Whether the local authority is administered by the Conservative (centre-right) party. | 0: Not Conservative  1: Conservative  9: Invalid |
| National-Level Political Allies | natpolally | Binary (Numeric) | Whether anti-fracking support can be found among national-level elites, such as political parties in opposition. | 0: Absent  1: Present |
| Submitted Fracking Site Application | fraplanapsub | Binary (Numeric) | Whether the local authority has received an application from industry requesting planning permission to build and operate a site related to hydraulic fracturing and shale gas. | 0: Absent  1: Present  9: Invalid |
| Physical Fracking Site Presence | physite | Binary (Numeric) | Whether a physical site intended for hydraulic fracturing has been or is currently under construction. | 0: Absent  1: Present  9: Invalid |
| Number of Fracking Sites | numfracksite | Continuous (Numeric) | The number of industrial developments earmarked for hydraulic fracturing operations to take place. | 0-2, 9 |
| Occurrence of Hydraulic Fracturing | acfrack | Binary (Numeric) | Whether hydraulic fracturing, as the process of high-pressure liquid injection into the ground to break rock layers to release shale gas, has been conducted. | 0: Absent  1: Present  9: Invalid |
| General Election (National Level) | genelec | Binary (Numeric) | Years in which there was – and was not – a general election in the UK (national level). | 0: No Election  1: Election |
| Local Election Occurrence | locelec | Binary (Numeric) | Years in which there was – and was not – elections for local authority bodies. | 0: No Election  1: Election  9: Invalid |
| Gross Disposable Household Income (GDHI), pounds million2 | gdhi | Continuous (Numeric) | A measure of annual gross disposable household income supplied by the ONS at the ITL3 level and current basic prices, in pounds million. ITL3 levels refer to the specific areas under each case county that experienced fracking, namely: Fydle (Lancashire); Ryedale (North Yorkshire); and, Rotherham (South Yorkshire). | 919-4419, 9999 |
| GDHI (Binary Based on Yearly Mean Scores) | gdhimean | Binary (Numeric) | GDHI re-organised based around the mean income calculated using each local area’s GDHI amount for each respective year. | 0: Below Mean  1: At or Above Mean  9: Invalid |
| Out-of-Work Benefits Claimant Rates (% Local Population)3 | owben | Discrete (Numeric) | The percentage of the local population that claims out-of-work benefits (Job Seekers Allowance, later Universal Credit from 2013 onwards). Figures are from the ONS and based on the ITL3 level. Note that national-level figures relate specifically to Great Britain and not to the whole United Kingdom. | 0.9-5.3 |
| Out-of-Work Benefits Claimants (GB Baseline Comparison) | owbenbase | Binary (Numeric) | Out-of-work benefits re-organised around the average claimant levels for Great Britain, as a percentage of the national population. | 0: Below Baseline  1: At or Above Baseline  9: Invalid |
| Economically Active (% Local Population)3 | econact | Discrete (Numeric) | The percentage of the local ITL3 population that are economically active; that is, employed (including self-employment). National-level figures refer to Great Britain only. ONS-derived. | 74-87.5 |
| Economically Active (GB Baseline Comparison) | econactbase | Binary (Numeric) | A re-organisation of economic activity data centred on the percentage of the population that are economically active at the Great Britain level. | 0: Below Baseline  1: At or Above Baseline  9: Invalid |
| Local Area Geographic Classification | geoclass | Nominal (String) | Classification of rurality or urban locational characteristics, based on UK Government information. | Urban with Minor Conurbation; Urban with City and Town; Mainly Rural; Undefined |
| Local Area Geographic Classification (Binary Measure) | geoclassbin | Binary (numeric) | A re-organisation of rural-urban classification data. | 0: Urban  1: Rural  9: Invalid |
| Local Authority Structure | latype | Nominal (String) | The organisational structure of local authorities. | County Council; Metropolitan Borough Council; Undefined |
| Local Authority Structure (Binary) | latypebin | Binary (Numeric) | Local authority structures re-organised into a binary measure. | 0: County Council  1: Metropolitan Borough Council  9: Invalid |
| Population Size (County)3,4 | popsizecount | Continuous (Numeric) | Total population size at the county level. National figures relate solely to Great Britain and were sourced from the ONS. | 601206-64732188, 9 |
| Population Size Increase (County) | popsizecountin | Binary (numeric) | Whether the county-relevant population size shows a yearly increase. | 0: No  1: Yes  9: Invalid |
| Population Size (ITL3) 3,4 | popsizeitl | Continuous (Numeric) | Total population size at the ITL3 level. | 759002-265991, 9 |
| Population Size Increase (ITL3) | popsizeitlin | Binary (numeric) | Whether ITL3 level population size shows a yearly increase. | 0: No  1: Yes  9: Invalid |
| Population by Gender (Male)3,4 | popgenm | Continuous (Numeric) | Total male population size. National figures relate solely to Great Britain and were sourced from the ONS. | 126514-31715610 |
| Population Percentage by Gender (Male) | popgenmp | Discrete (Numeric) | The total male population size as a percentage of the total population, rounded to one decimal place. | 49-49.4 |
| Population by Gender (Female)3,4 | popgenf | Continuous (Numeric) | Total female population size. National figures relate solely to Great Britain and were sourced from the ONS. | 131202-33016578 |
| Population Percentage by Gender (Female) | popgenfp | Discrete (Numeric) | The total female population size as a percentage of the total population, rounded to one decimal place. | 50.6-51 |
| Females in the Population | fempop | Binary (numeric) | Whether there are more females in the given population, such as by year and/or county. | 0: No  1: Yes  9: Invalid |
| Population Aged 16-643,4 | popworkage | Continuous (Numeric) | Total population at working age, from 16 to 64. National figures relate solely to Great Britain and were sourced from the ONS. | 162100-40763200 |
| Population Percentage Aged 16-643,4 | popworkagep | Discrete (Numeric) | The total working age population (16 to 64 years old) as a percentage of the total population, rounded to one decimal place. | 59-63.5 |
| Population Aged 16-64 Increase | popworkagein | Binary (numeric) | Whether there has been an increase in the number of individuals aged 16 to 64, based on popworkage. | 0: No  1: Yes  9: Invalid |
| Population Aged 65+4 | popretage | Continuous (Numeric) | Total population at retirement age, from 65 onwards. | 212932-252149, 9999 |
| Population Percentage Aged 65+ | popretagep | Discrete (Numeric) | The number of individuals aged 65 or older as a percentage of the total population, rounded to one decimal place. | 18.2-20.7, 99 |
| Population Aged 65+ Increase | popretagein | Binary (numeric) | Whether there has been an increase in the number of individuals aged 65+, based on popretage. | 0: No  1: Yes  9: Invalid |
| Voter Turnout Percentage GE5 | geturn | Discrete (Numeric) | Voter turnout percentage for UK general elections with county data based on the Westminster constituencies where fracking sites were planned or being developed, namely: Fylde (Lancashire); Thirsk and Malton (N. Yorks); Rotherham (S. Yorks). | 59.4-71.1, 99 |
| Total GE Votes5 | gevotes | Continuous (Numeric) | The total number of UK general election votes cast nationally (UK) and by Westminster constituency. | 37832-32204184, 9999 |
| GE Vote Percentage Conservatives5 | gevotepcon | Discrete (Numeric) | The percentage of the total vote for the Conservatives, following gevotes. | 12.3-58.8, 99 |
| GE Vote Total Conservatives5 | gevotescon | Continuous (Numeric) | Total General Election votes cast for the Conservatives. | 4656-13636684, 9999 |
| GE Vote Percentage Green5 | gevotepgreen | Discrete (Numeric) | The percentage of the total vote for the Green Party, following gevotes. | 1.6-4.6, 99 |
| GE Vote Total Green5 | gevotesgreen | Continuous (Numeric) | Total General Election votes cast for the Green Party. | 1100-1111603, 9999 |
| GE Vote Percentage Labour5 | gevoteplab | Discrete (Numeric) | The percentage of the total vote for Labour, following gevotes. | 15.4-56.4, 99 |
| GE Vote Total Labour5 | gevoteslab | Continuous (Numeric) | Total General Election votes cast for Labour. | 8182-12877918, 9999 |
| GE Vote Percentage Liberal Democrats5 | gevoteplib | Discrete (Numeric) | The percentage of the total vote for the Liberal Democrats, following gevotes. | 2.9-7.9, 99 |
| GE Vote Total Liberal Democrats5 | gevoteslib | Continuous (Numeric) | Total General Election votes cast for the Liberal Democrats. | 1093-2415916, 9999 |
| GE Vote Percentage UKIP5 | gevotepukip | Discrete (Numeric) | The percentage of the total vote for the United Kingdom Independence Party (UKIP), following gevotes. | 1.8-30.2, 99 |
| GE Vote Total UKIP5 | gevotesukip | Continuous (Numeric) | Total General Election votes cast for UKIP. | 1532-3881099, 9999 |
| GE Left Party Vote Share Percentage | geleftvotep | Discrete (Numeric) | The percentage of total General Election votes cast for left-leaning parties, here defined to include Labour, Greens and Lib Dems. This variable calculates the percentage vote share based on total votes cast for the Conservatives, Greens, Labour, Lib Dems and UKIP only, excluding other parties that are still reflected in gevotes totals. Calculated using geleftvotes and gerightvotes. | 29.3-63.5, 99 |
| GE Vote Total Left Parties | geleftvotes | Continuous (Numeric) | The total number of General Election votes for Greens, Labour and Lib Dems combined. Figures based on party-specific gevotes variables. | 11186-15762106, 9999 |
| GE Vote Total Right Parties | gerightvotes | Continuous (Numeric) | The total number of General Election votes for Conservatives and UKIP, combined. Figures based on party-specific gevotes variables. | 13333-15189708, 9999 |
| GE Left Party Largest Vote Total | geleftlarge | Binary (numeric) | Whether left-leaning parties (Greens, Labour, Lib Dems) received more votes that right-leaning parties (Conservatives, UKIP) in General Elections, based on geleftvotes and gerightvotes. | 0: No  1: Yes  9: Invalid |
| Total LE Votes | levotes | Continuous (Numeric) | The total number of votes cast in local elections, covering the main local authorities with jurisdictions encompassing planned or actual fracking sites. These include: Lancashire County Council; North Yorkshire County Council, Rotherham Metropolitan Borough Council (S. Yorks). | 60410-320706, 9999 |
| LE Vote Percentage Conservatives6 | levotepcon | Discrete (Numeric) | The percentage of the total vote for the Conservatives, following levotes. | 9.5-53.3, 99 |
| LE Vote Total Conservatives6 | levotescon | Continuous (Numeric) | Total local election votes for the Conservatives. | 6482-84420, 9999 |
| LE Vote Percentage Green6 | levotepgreen | Discrete (Numeric) | The percentage of the total vote for the Green Party, following levotes. | 0.2-7, 99 |
| LE Vote Total Green6 | levotesgreen | Continuous (Numeric) | Total local election votes for the Green Party. | 164-11293, 9999 |
| LE Vote Percentage Labour6 | levoteplab | Discrete (Numeric) | The percentage of the total vote for Labour, following levotes. | 15.8-55-3, 99 |
| LE Vote Total Labour6 | levoteslab | Continuous (Numeric) | Total local election votes for Labour. | 23114-114720, 9999 |
| LE Vote Percentage Liberal Democrats6 | levoteplib | Discrete (Numeric) | The percentage of the total vote for the Liberal Democrats, following levotes. | 0.2-11.3, 99 |
| LE Vote Total Liberal Democrats6 | levoteslib | Continuous (Numeric) | Total local election votes for the Liberal Democrats. | 136-29115, 9999 |
| LE Vote Percentage UKIP6 | levotepukip | Discrete (Numeric) | The percentage of the total vote for UKIP, following levotes. | 2.9-44.3, 99 |
| LE Vote Total UKIP6 | levotesukip | Continuous (Numeric) | Total local election votes for UKIP. | 5306-41326, 9999 |
| LE Left Party Vote Share Percentage | levoteleftp | Discrete (Numeric) | The percentage of total General Election votes cast for left-leaning parties, here defined to include Labour, Greens and Lib Dems. This variable calculates the percentage vote share based on total votes cast for the Conservatives, Greens, Labour, Lib Dems and UKIP only, excluding other parties that are still reflected in levotes totals. Calculated using leleftvotes and lerightvotes. | 36.4-64.5, 99 |
| LE Vote Total Left Parties | leleftvotes | Continuous (Numeric) | The total number of local election votes for Greens, Labour and Lib Dems combined. Figures based on party-specific levotes variables. | 28416-155128, 9999 |
| LE Vote Total Right Parties | lerightvotes | Continuous (Numeric) | The total number of local election votes for Conservatives and UKIP, combined. Figures based on party-specific levotes variables. | 18988-153406, 9999 |
| LE Left Party Largest Vote Total | leleftlarge | Binary (numeric) | Whether left-leaning parties (Greens, Labour, Lib Dems) received more votes that right-leaning parties (Conservatives, UKIP) in local elections, based on leleftvotes and lerightvotes. | 0: No  1: Yes  9: Invalid |

**Supplementary Data Sources**

*(See above table)*

1 Garland, J., Saunders, C., Olcese, C. and Tedesco, D. (2023). Anti-Fracking Campaigns in the United Kingdom: The Influence of Local Opportunity Structures on Protest. *Social Movement Studies*. 22(2):211-31. https://doi.org/10.1080/14742837.2022.2031956.

2 Office for National Statistics (ONS) (2023). *Regional Gross Disposable Household Income: Local Authorities by ITL1 Region*. Available: https://www.ons.gov.uk/economy/regionalaccounts/grossdisposablehouseholdincome/datasets/regionalgrossdisposablehouseholdincomelocalauthoritiesbyitl1region (accessed 25th February 2024).

3 Office for National Statistics (ONS) (2023). *Local Authority Profile*. Available: https://www.nomisweb.co.uk/reports/lmp/la/contents.aspx (accessed 16th December 2024).

4 Lancashire County Council (2024). *Mid-Year Population Estimates*. Available: https://www.lancashire.gov.uk/lancashire-insight/population-and-households/population/mid-year-population-estimates/ (accessed 16th December 2024).

5 UK Parliament (2024). *Election Results*. Available: https://electionresults.parliament.uk/general-elections (accessed 21st December 2024).

6 Teale, A. (2024). *Local Elections Archive Project.* Available: https://www.andrewteale.me.uk/leap/ (accessed 20th December 2024).

**References**

Earl, J., Soule, S. and McCarthy, J. (2003). Protest Under Fire? Explaining the Policing of Protest. *American Sociological Review*. 68(4):581-606. https://doi.org/10.2307/1519740.

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Koopmans, R., and Rucht, D. (2002). Protest Event Analysis. In: Klandermans, B. and Staggenborg, S. (eds). *Methods of Social Movement Research*. Minneapolis, MN: University of Minnesota, 231-59.