Field Dynamics

EVA England

Electric Vehicle Association England

CONSTITUENCY MAP METHODOLOGY

RELEASE 1.0

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2 Introduction

Purpose of this Report

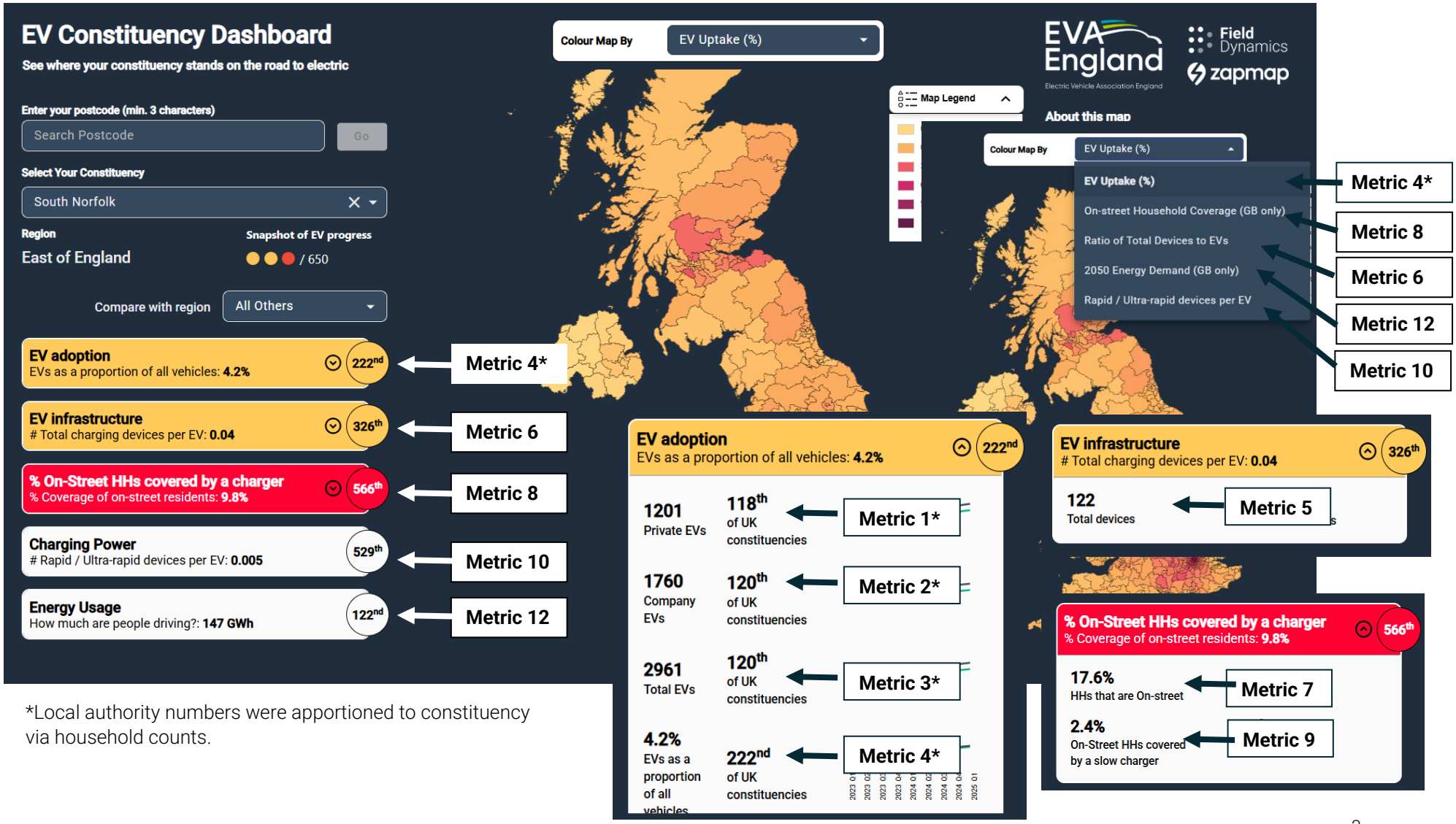
This document outlines the key methodological steps and assumptions that underpin the metrics presented in the EVA Constituency Map.

The methodologies are divided into three groups:

- EV adoption
- EV infrastructure
- Energy demand

The actual metrics on the interface are outlined in the following section.

3 EVA Interface and Metrics



*Local authority numbers were apportioned to constituency via household counts.

4 EV Adoption

This section describes the methodology used to derive electric vehicle (EV) counts for cars and vans using data from the Department for Transport (DfT). Two datasets were used: **VEH0142** and **VEH0105**.

Metric 1 - Private battery electric vehicles by the Local Authority:

- *Private electric cars:* Private registrations of Electric Cars (VEH0142)
- *Private electric vans:* Private registrations of Electric Vans (VEH0142)

Handling of miscellaneous Private EVs:

The DfT dataset includes instances where the local authority (LA) is recorded as *unknown*, although the region is usually specified.

- For private EV records where the LA is unknown, but the region is known, the total number of miscellaneous cars and vans was apportioned evenly across all LAs within that region. These values were then added to each LA's private EV totals.
- Records where both the LA and region were unknown were excluded entirely from the dataset.

Metric 2 - Company battery electric vehicles by the Local Authority:

Company electric cars:

- Company electric car counts were obtained from regional totals in VEH0105.
- Regional values were summed to produce a UK total, excluding records where the region was unknown.
- To distribute company EVs across LAs, private EV counts were used to create proportional weights. LAs with higher numbers of private EVs received a larger share of company EVs.
- This approach corrects for distortions where large fleets are registered to a single business address but operate across wider areas.

Company electric vans:

- Company electric van counts were calculated using the same proportional distribution method applied to cars.

Metric 3 - Total EVs by Local Authority

Private Electric cars and vans [(1)] + Company electric cars and vans [(2)]

Total cars and vans by Local Authority

The following components were used:

- *Private registrations*: Private car and van registrations from VEH0105.
- *Private miscellaneous:* Miscellaneous private records were proportionally split across LAs within each region. Records with an unknown region were excluded.
- *Company registrations*: Regional totals for company-registered cars and vans were used, including miscellaneous values where the region was known and excluding those without a

known region. These totals were allocated to LAs proportionally based on private vehicle distributions, mirroring the method used for EVs.

- *Total registrations:* Private + Company

Metric 4 - EVs as a proportion of all vehicles:

The proportion of EVs within each local authority was calculated as:

Total electric cars and vans [3] / Total cars and vans

Apportionment from the local authority to constituencies

- Household counts were obtained for each local authority.
- LA boundaries were spatially clipped to constituency boundaries, creating unique LA–constituency intersecting areas.
- Households were re-counted within each clipped area.
- A proportional factor was derived as:
  Households in clipped 'LA–constituency' area / Households in the original LA
- This factor was applied to LA-level EV counts to estimate EV totals at constituency level.

5 EV Infrastructure

The following outlines the steps taken to assess the coverage of existing EV chargers within each parliamentary constituency.

The analysis draws on two primary data sources: Zapmap device location data (from September/October 2025) and Field Dynamics' EVMap (produced April 2025). EVMap provides an assessment of residential buildings across Great Britain, identifying whether each property has access to a driveway.

Metric 5 - Total Devices:

Data attributed from Zapmap constituency extract: 'total_devices' provided by EVA England

Metric 6 - Total charging devices per EV:

A ratio of the Total devices from ZapMap [5] / Total EVs (cars and vans)[3] for each Constituency.

Metric 7 - Households that are on-street:

Percentage of households in the constituency that cannot park and charge on their property (on-street households), calculated using EVMap.

Metric 8 - Coverage of on-street residents:

Isochrones representing a 5-minute walking distance were generated for each ZapMap device location. For each constituency, the coverage is calculated as 'on-street households within a device catchment' / 'total on-street households in constituency'**.** If the '5-minute walk' catchment of a device extends beyond a constituency boundary, on-street households in neighbouring constituencies will still be considered 'covered' if they're within the catchment.

Metric 9 - On-street HHs covered by a slow charger:

On-street HHs within a 5-minute walk of a slow charger. The same logic as above applies.

Metric 10 - Rapid/Ultra rapid devices per EV:

Rapid/Ultra (incl. Tesla) devices / Total EVs [3]

Metric 11 - Slow devices per EV:

Slow/Fast devices / Total EVs [3]

6 EV Energy Demand

Sourced from Field Dynamics' GigaMap product, which is the energy demand for each LSOA.

Metric 12 - 2050 Energy Demand:

LSOA areas were spatially apportioned to parliamentary constituencies by clipping each LSOA to the corresponding constituency boundary. Energy demand (kWh) within each LSOA was then scaled by the proportional area of the clipped section, and these adjusted values were summed to produce total energy demand at the constituency level.

7 Ranking

Each metric has been assigned both a rank and a corresponding Red/Amber/Green (RAG) rating, reflecting its national and regional significance.

Ranks are based on highest to lowest value, with the highest values receiving the best rank and the lowest values the worst. Where two or more constituencies share the same metric value, they are assigned an identical rank.

The RAGs are:

- **Green** *(Top 25% of constituencies)*
- **Amber** *(25-75% of constituencies)*
- **Red** *(Bottom 25% of constituencies)*